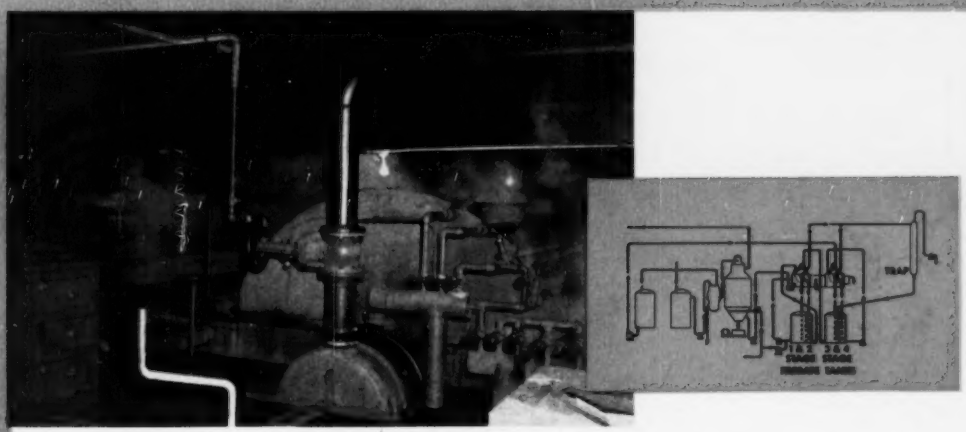
Paper TRADE JOURNAL

FEBRUARY 3, 1949



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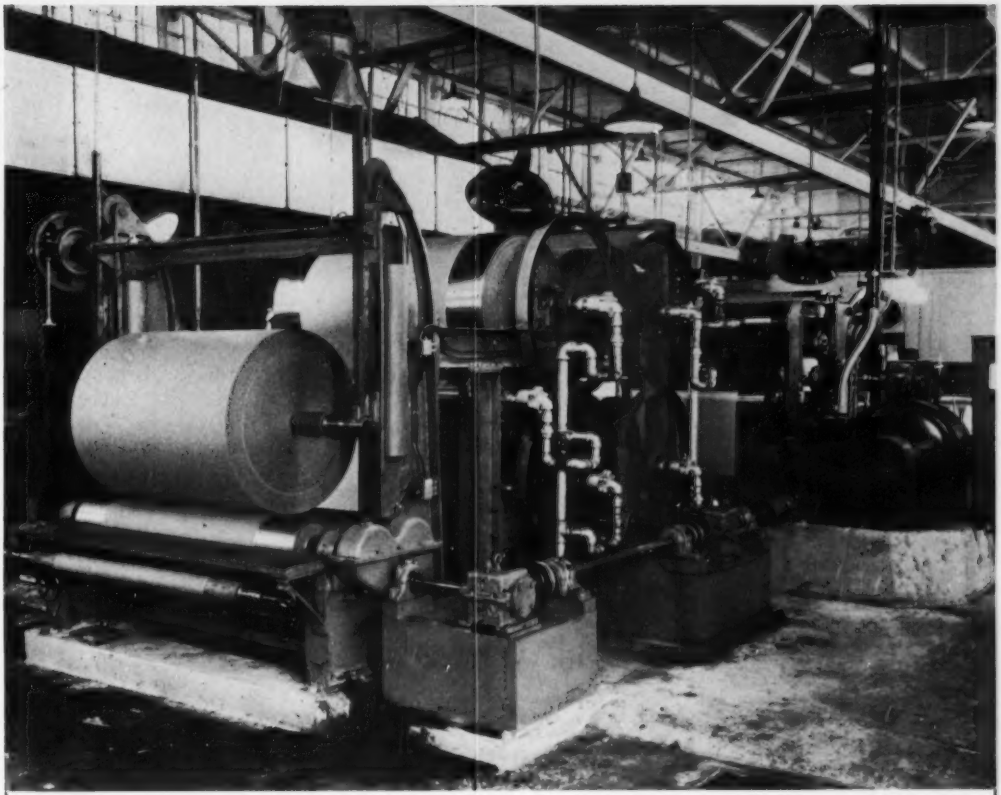

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MEMBER

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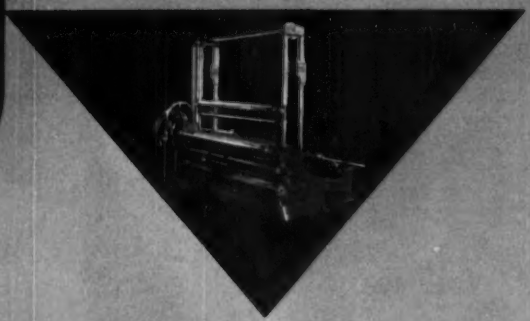

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Paper TRADE JOURNAL

FEB. 3, 1949

VOL. 128, NO. 5

Canadian Pulp & Paper Association

Technical Section's 35th Annual Meeting

1200 Foregather at Montreal January 26-28

MONTREAL — Approximately 1,200 members and guests assembled for the meeting of the Canadian Pulp & Paper Ass'n., and its Technical Section at the Mount Royal Hotel, January 26-28, to appraise current conditions, weigh possibilities for the future and plan their contributions to the advancement of the paper industry.

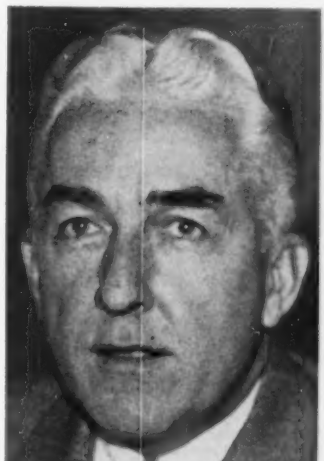
Harold S. Foley, president of the Powell River Co., Ltd., Vancouver, B. C., was elected chairman of the executive board of the Association, succeeding L. J. Belnap, chairman of the board of the Consolidated Paper Corp., Ltd., Montreal. Mr. Belnap was elected a vice-chairman, and S. L. de-Carteret, president of the Canadian International Paper Co., Montreal, was re-elected a vice-chairman. Honorary chairmen are Paul E. Cooper of Pacific Mills, Ltd., Vancouver, B. C., and C. R. Whitehead, vice-president of the Consolidated Papers Corp., Ltd. President of the Association is R. M. Fowler and F. L. Mitchell is manager.

John Buss, mill manager of the Bathurst Power & Paper Co., Bathurst, N. B., was elected chairman of the Technical Section of the Association, succeeding F. J. Giffen, assistant to manager of manufacturing, newsprint division, of the Canadian International Paper Co., Montreal.

New councillors to the Technical Section, elected at the meeting, were John Hanna, mill manager, Bathurst Power & Paper Co., Bathurst, N. B., and Walter W. Holland, general superintendent, Quebec North Shore Paper Co., Baie Comeau, P.Q. Continuing councillors are: E. G. Kirby of Price & Pierce, Ltd., Montreal; G. A. Franklin of the E. B. Eddy Co., Ltd., Hull, P.Q.; Dr. J. Edwards of Price Bros., & Co., Kenogami, P.Q.; and W. C. R. Jones of the Howard Smith Paper Mills, Ltd., Beauharnois, P.Q.

Group discussions were devoted to: Board, mechanical pulping, newsprint, waste, alkaline pulping, mechanical pulping process instrumentation, sulphite and wood chemistry. Papers on some 20 technical subjects were read and these will be presented in abstract form in next week's issue of *Paper Trade Journal*.

Addressing the annual luncheon of the Section, D. W. Ambridge, president of the Abitibi Power & Paper Co., Ltd., Toronto, featured speaker., said that a survey taken in the U. S., showed that industrial companies there spent an average of one and one-half to two cents for every sales dollar on research. He pointed out that if the Canadian paper industry is to progress and match strides made by U. S. companies, it must spend on research sums commensurate with those spent by companies below the border. After investigation of paper companies wholly owned by Canadians, Mr. Ambridge said he found the amount spent on research was less than the U. S. figure. "I am quite aware that many of the companies in our industry are subsidiaries of American companies who do full-scale research work in the U. S., but in spite of all this . . . research in the Canadian pulp and paper industry is in its infancy and is in fact, quite undeveloped," Mr. Ambridge added.



HAROLD S. FOLEY
Chairman
Canadian Pulp & Paper Ass'n.

President's Report

In his Annual Report, on January 28, R. M. Fowler, president of the Association, said in part:

"Instead of reporting on the past year, I will try to assess where we stand today and where we are likely to go in the year ahead. For the Canadian pulp and paper industry, the achievements of the year 1948, the present health of the industry, and the state of its union are all of the best.

"The past 12 months was a year of new records of production and benefit to the companies, their employes, their customers, and to Canada. All my estimates are made in relation to 1947, which was itself a record year. The total estimated production of the Canadian industry increased by 260,000 tons and the gross value of pulp and paper production increased by nearly $100 millions.

"There were 51,000 permanent jobs provided by the industry in 1948, apart from woods workers. Salaries and wages paid to these permanent workers in the industry rose to a total of approximately $146 millions, an increase of nearly $17 million over 1947. In addition, payments to woods workers in 1948 totalled nearly $132 millions, an increase of $8 million over 1947. Canadian governments will receive probably $12 to $15 million dollars additional from 1948 operations, bringing the industry's total tax bill close to $100 millions for the year.

The contribution of the pulp and paper industry to other industries and to the whole Canadian economy has likewise increased materially, although detailed figures for 1948 are not available. However, some idea of the way the operations of the pulp and paper mills provide jobs for Canadians in other industries can be gathered from the figures for 1947. In that year transportation payments totalled nearly $120 millions; chemicals cost over $52

At the Head Table, CPPA Luncheon, January 28

Left to right: L. W. Michael, George L. Carruthers, J. P. Lee and E. M. Little.

Left to right: A. A. Schmon, R. L. Weldon and W. J. LeClair.

Left to right: S. L. deCarteret, R. M. Fowler, L. J. Belknap, H. S. Foley and E. W. Tinker.

Left to right: L. J. Belknap, H. S. Foley, E. W. Tinker, C. R. Whitehead and F. G. Robinson.

Left to right: R. A. Hayward, D. W. Ambridge and C. H. Sage.

Left to right: P. M. Fox, J. R. S. McLarnan, W. S. Kidd and F. L. Mitchell.

EDITOR'S NOTE: At the Head Table, but not shown in these photographs, were Aubrey Crabtree, president of the Fraser Companies, Ltd., Edmundston, N. B., and Hugo Hanson of W. C. Hamilton & Sons, Miquon, Pa., who is president of the Association of Pulp Consumers.

JOHN BUSS

Chairman, Technical Section

Canadian Pulp & Paper Ass'n.

millions; fuel nearly $32 millions; electric power nearly $24 millions; food and fodder approximately $25 millions. All these figures can safely be increased by 12 or 15 percent for the year 1948.

"New capacity figures for the Canadian newsprint industry have just come to hand. They show a rated capacity for 1949 of 4,667,000 tons, an increase of 189,000 tons over the figure of a year ago. Despite droughts, both at the beginning and end of 1948, the newsprint industry produced over 150,000 tons more than in 1947, and 457,000 tons more than in 1946.

"Unfortunately, monetary difficulties in 1948 materially curtailed the ability of overseas customers to buy Canadian newsprint. This trend is likely to continue in 1949. As a result, publishers in Canada and the United States received substantially more newsprint and, while many demands for additional tonnage still exist, it is probable that newsprint supply on this continent is closer to satisfying the demand than it has been at any time in the past six or seven years. The prospect for 1949 is a continued overall shortage of newsprint, but a fairly close balance between supply and demand and, certainly, few cases of serious shortage and distress.

"Other branches of the industry have had a similar development in the past year. The increasing demand for kraft pulp has been reflected in the construction of three new sulphate pulp mills in Canada having a total projected capacity of some 160,000 tons annually. This production will be additional to existing capacity of some 800,000 tons a year, and will come into operation progressively in the next two years.

"Pulp production, both for export and for domestic use, rose during 1948. The same statement can be made for almost every grade of paper production, including wrapping papers, paperboard, book and writing papers, specialty papers, building boards, and other products The level of demand and consumption stands today at a very high point and it is absurd to talk of the present situation as being a 'slackening' or 'softening' of demand. I suggest also it is absurd to regard the attainment of balance between supply and demand as something in the nature of a calamity.

"A year ago I referred to the basic

problem of Canada's foreign trade which resulted in a serious shortage of United States dollars. The results of the past year's trading as announced by the Canadian government have been encouraging, but it is clear that the problem is still far from solved.

"I believe that, on balance, the results of progressively freer trade in pulp and paper products between Canada and the U. S., would be beneficial to all concerned.

"For the Canadian pulp and paper industry the opening of the American market in products other than newsprint and pulps would create problems and difficulties, but immense opportunities. For the pulp and paper industry of the U. S., the expansion of trade between our two countries presents a similar challenge and a similar opportunity. There are innumerable commodities in which U. S., mills have greater experience and greater skills, for which the opening of the Canadian market would offer substantial trading developments.

"Trading between Canada and the United States is not, however, the whole story. The Canadian pulp and paper industry is a world trader and trading prospects in countries outside North America are discouraging. The cause is an artificial one: lack of dollars, inability to convert other currency into ours.

"In the past year one traditional market after another has been reduced or has disappeared, and old customers for Canadian products have turned to other countries at much higher prices or have gone without supplies they wished to have. There is something wrong when a country like Australia, with a long tradition of trade with North America, particularly in pulp and paper products, can now buy them at inflated prices from Italy, Germany, Finland, and even a little from Japan, all of them recent enemies, and from Sweden, which was neutral, but cannot buy from Canada, a sister Dominion and an old commercial friend, or from the U. S., a country largely responsible for saving her from the horrors of invasion.

"Across the prospect for 1949, there falls the shadow of world unrest and international misunderstanding. It now seems clear that our best chance of avoiding war lies in an extensive and intensive preparation of our defences.

"We must also remember that in making our defence preparations our hopes of a rapidly rising standard of living must be postponed simply because more and more of our resources must be diverted into the economically useless and costly weapons of war."

Pulpwood

Harvesting the current pulpwood crop, which is 16 percent lses than last year's all-time record, is progressing very satisfactorily, said J. W. Paterson, woodlands manager of the E. B. Eddy Co., Hull, P.Q., who is chairman of the CP&PA Woodlands Section. Mr. Paterson added that the total physical inventory of wood is about 15 percent greater than at this time last year and further along the trail to the mill. There is also an ample number of woods workers available, but the total employed is 15 to 20 percent under that of a year ago, he reported. During 1948, membership of the Woodlands Section, one of the two scientific societies operated by the Association, increased by 17 percent to a total of 815; and 44 papers and a handbook on forest operations were issued.

Groundwood

The demand for groundwood, or mechanical pulp, continued strong in 1948 and the Canadian industry slightly surpassed its record 1947 output of 4¼ million tons, stated E. J. Thom, chairman of the Mechanical Pulp Section. Most of this increase was made by the newsprint mills, said Mr. Thom, who is manager of the pulp department of the Howard Smith Paper Mills Ltd., Montreal. While exports were down, he pointed out that shipments to the U. S., increased. A rebuilt mill which came into production early in 1948 assisted in meeting the demand for market pulp. A new groundwood mill commenced operations on the west coast early in the year, too, said Mr. Thom.

Paperboard

The demand for Canadian paperboard experienced since the start of the war was maintained during 1948 when an estimated record output of some 685,000 tons was produced, said I. S. Babbitt, chairman of the Board Section. The output of the mills increased by more than eight percent during the year. Mr. Babbitt, who is general manager of the Gair Company Canada Ltd., Montreal, pointed out that the import restrictions imposed by other countries due to their exchange difficulties are curtailing exports of Canadian paperboard. While most of the output of paperboard is consumed in Canada, the export market is of considerable importance and the industry, having lost some of its traditional markets, is now engaged in developing new ones.

R. M. FOWLER
President
Canadian Pulp & Paper Ass'n.

WIN SAFETY AWARDS

Harry J. Spencer (center) accepts from J. N. Stephenson, on behalf of the Howard Smith Paper Mills, Ltd., Beauharnois mill, shield which it won in Class A in the Safest Mill in Canada Contest. . . . At right is G. M. Minard of the Spruce Falls mill of the Kimberly-Clark Corp., of Canada, which won the shield in Class B.

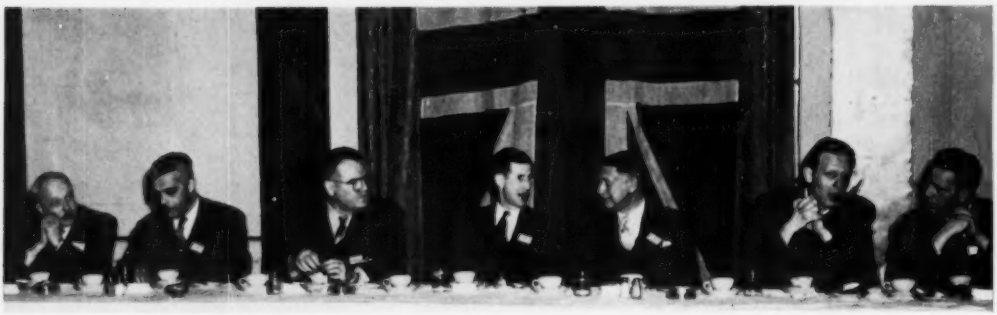
Fine Paper

The fine paper mills in Canada during 1948 overcame the shortage prevailing at the beginning of the year and now have available many grades in heavier weights, said R. H. Ecclestone, chairman, Book and Writing Section. Mr. Ecclestone, who is sales manager of Rolland Paper Co., Ltd., Montreal, pointed out that dollar deficiencies in overseas markets had temporarily reduced exports of Canadian fine papers. This export tonnage has been turned to the domestic market and together with high production has assisted in meeting Canadian requirements. Owing to the tremendous expansion of Canadian industry, and especially the great strides of the printing industry, Mr. Ecclestone pointed out that the domestic demand in 1949 for fine papers will vastly exceed that of prewar.

Wrapping Papers

The demand for Canadian wrapping papers in 1948 remained steady and this is likely to continue in 1949, according to J. O. Chenevert, chairman of the Wrapping Paper Section. Nevertheless, warned Mr. Chenevert, who is vice-president of Consolidated Paper Sales, Ltd., Montreal, the uncertain world situation holds potentials

Head Table Guests, Annual Luncheon, Technical Section



Left to right—Dr. W. Boyd Campbell, director of technical research, Pulp & Paper Research Institute of Canada, Montreal; E. G. Kirby of Price & Pierce, Ltd., Montreal, councillor, Technical Section; A. E. Bachmann of Missiquoi Corp., Sheldon Spring, Vt., vice-president, TAPPI (U. S.); G. A. Franklin of the E. B. Eddy Co., Hull, P. Q., councillor, Technical Section; Dr. Otto Maass, director general, Pulp & Paper Research Institute of Canada, Montreal; Dr. B. Steenberg, director of research, Swedish Forest Products Research Laboratory, Stockholm, Sweden; and Dr. J. Edwards of Price Bros. & Co., Ltd., Kenogami, P. Q., councillor, technical section.

R. M. Fowler, president, Canadian Pulp & Paper Ass'n., Montreal; John Buss of Provincial Paper, Ltd., Toronto, vice-chairman, Technical Section; F. L. Mitchell, manager, CP&PA, Montreal; L. J. Belknap, board chairman, Consolidated Paper Corp., Ltd., Montreal, chairman, executive board, CP&PA; L. Manley, secretary-manager, Western branch, CP&PA, Vancouver, B. C.; and H. Crabtree, president, Canada Paper Co., Montreal.

which may dislocate the whole economic situation. This fact, together with a growing buyers' market, could adversely affect the market for wrapping papers, despite the continuing demand, he felt.

Specialty Papers

Canadian specialty papers were in strong demand in 1948, according to R. B. Hall, chairman of the Specialty Papers Section. Production of tissue grades remained constant but some other grades increased substantially over 1947, and supply and demand are in closer balance and it is possible this will become more pronounced in 1949, reports Mr. Hall, who is sales manager of the Canada Paper Co., Ltd., Montreal. Canadian mills, Mr. Hall added, have had considerable success in developing substitutes for papers heretofore imported. They plan to continue their efforts and provide a range of products that will satisfy the expanding Canadian market.

Awards Conferred

Two special awards were conferred at the annual luncheon. One was to Mr. Belnap in appreciation of his services to the Association during the past year (presented by Mr. de Carteret) and the other was presented by Mr. Belnap to Mr. Whitehead in recognition of 26 years outstanding service in the interest of the Association's affairs.

Awards for the best paper read at its last annual meeting, for the committee chairman who contributed the most valuable service in 1948, and for the safest mill in Canada contest, were also presented at the luncheon.

The I. H. Weldon Memorial Medal was presented by its donor, A. L. Dawe, vice-president of the Consolidated Paper Corp., Ltd., Montreal, to E. T. Buchanan, assistant chief engineer of that firm at Grand'Mere, P.Q., for his paper entitled "Suction Rolls and Vacuum Requirements".

The Technical Section Service Award, given to the committee chairman who has rendered the most valuable service to the section during the year was presented to J. B. Beck, superintendent of the E. B. Eddy Co., specialty mills, at Hull, P.Q., by R. L. Weldon, president of the Bathurst Power & Paper Co., Ltd., Montreal.

The Safest Mill in Canada contest is sponsored by *Pulp & Paper Magazine* of Canada which annually awards shields to the paper mills in two classes which have the fewest accidents during the year in proportion to their operating time. Winner of class A, for paper mills with over 50,000 man hours per month, was Howard Smith Paper Mills, Ltd., at Beauharnois, which had no accidents for 1,127,179 payroll hours in 1948. The Kimberly-Clark Corp. of Canada mill at Spruce Falls, Ont., which had no accident for 95,-021 payroll hours was the winner in class B, for mills with under 50,000 man hours per month.

Canadian Pulp & Paper Ass'n., Montreal, January 27

A. L. Dawe, vice-president, Consolidated Paper Corp., Ltd., Montreal; E. W. Tinker, executive secretary, American Paper & Pulp Ass'n., New York City; R. L. Weldon, president, Bathurst Power & Paper Co., Ltd., Montreal; D. W. Ambridge, president, Abitibi Power & Paper Co., Ltd., Toronto; and F. J. Giffen, assistant to the manager of manufacturing, Newsprint Division, Canadian International Paper Co., Montreal, chairman of the Technical Section of the Canadian Pulp & Paper Ass'n.

W. C. R. Jones of the Howard Smith Paper Mills, Ltd., Beauharnois, P.Q., councillor, Technical Section; J. E. Vallillee, assistant to the president, in charge of industrial relations, Ontario Paper Co., Ltd., Thorold, Ont.; C. E. Turner of Building Products, Ltd., Montreal, councillor, Technical Section; R. G. Macdonald, secretary-treasurer, TAPPI (U.S.), New York City; and Douglas Jones, secretary-engineer, Technical Section, CP&PA, Montreal.

Industrial Relations

The Industrial Relations Section improved and enlarged its studies on matters related to personnel administration in the pulp and paper industry, during 1948, said J. E. Vallillee, the section's chairman. The section prepared studies on the cost of living, real earnings and take-home pay, comparison of weekly earnings with other industries, and hourly rates. In addition, questionnaires were circulated throughout the industry requesting information on industrial relations. Further, said Mr. Vallillee, during the year a thorough analysis of all collective labour agreements in the industry was undertaken. Mr. Vallillee is assistant to the president in charge of industrial relations, Ontario Paper Co., Ltd., Thorold, Ont.

Membership Growth

Membership in the Technical Section one of the Association's two scientific bodies, increased during 1948 from 927 to 1050, said F. J. Giffen, the section's chairman, adding that with the establishment last October of the St. Maurice Valley branch, the section now has seven branches located from coast to coast. Branch membership now exceeds 1510. During the year an honorary life membership was presented to D. A. Evans, director, Powell River Co., Ltd., Powell River, B.C.

Mr. Giffen said that the Technical Section plans to study the utilization of hardwods for pulp in cooperation with the Association's Woodlands Section. He added that the number of university and other lectures sponsored or contributed to by the section will be increased this year to attract more technical men to the pulp and paper industry and widen the knowledge of Canadians of their greatest industry.

Western Branch

The activities and influence of the Western Branch of CP & PA were considerably extended during 1948, said J. A. Young, chairman of the branch's executive committee. Mr. Young, who is first vice-president and treasurer of Pacific Mills, Ltd., Vancouver, B.C., said (1) that the Western branch was represented in the B.C. Trade Delegation, which visited Great Britain in May 1948, by Logan Mayhew, vice-president of the Sidney Roofing Paper Co., Ltd., Victoria, B. C.; (2) Negotiations were finalized between the Western branch and the Board of Vancouver Parks Commissioners for landscaping, construction, and development of a 35 acre arboretum sponsored by the branch on Ltitle Mountain in the heart of Vancouver; (3) nine industry executives gave lectures at the University of British Columbia on all phases of pulp and paper, a brief was submitted to the Workmen's Compensation Board incorporating the recommendations on the treatment of cardiac cases by a prominent heart specialist retained by the Western branch, and to stimulate safe conditions in the industry's plants, it inaugurated two awards; (4) During the year Columbia Cellulose Co., Ltd., Vancouver, B. C., joined the Western branch and Canadian Forest Products Ltd., New Westminster, B. C., has applied for membership.

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Determination of Sizing by the Wet Break Test

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Abstract

A description is given of the wet break test with emphasis on the dying properties which is measured. The shortcomings of the water penetration test are mentioned. (6)

In studying the theory of engine sizing, it became apparent that the water penetration test has a very large blind spot in a very much used region of sizing. To explore this region an old, but still occasionally used test, was used and soon it was realized that what is called the Wet Break Test is infinitely more useful than the water penetration test and also possesses certain advantages over other types of test. One and a half centimeter strips, having various weights attached to one end, are suspended in water until the strip breaks. A curve of time to break is then plotted against the weights used.

There is none of the uncertainty incident to exact and reproducible blotting of a wet sheet or in weighing it while the water is evaporating. There is nothing tricky or uncertain about the endpoint. Since a curve of time against weight is plotted, the weights do not have to be standardized. Any handy pieces of material can be weighed and attached to the clip. A row of hooks in a stick of wood or the edge of a laboratory shelf furnishes the necessary support. The number of tests that can be run simultaneously depends solely upon the number of hooks available and the size of the container. This can be anything from a beaker with the bottom padded to a discarded steel drum. The only expense is a few well-made paper clips from the stationery store. The test can be run against any desired liquid that will stay in the container.

The test is speedier than most tests and for control work, speed and sensitivity can be adjusted to fit any desired set of conditions. One very definite and unmistakeable endpoint, entirely free from the personal equation, covers all possible degrees of wetness. A few points as determined and plotted gives a curve which completes the entire wetting story of the sheet with no blind spots or possibility of disagreement between different observers. Blind spots are areas where very significant physical changes are taking place after the endpoint has occurred.

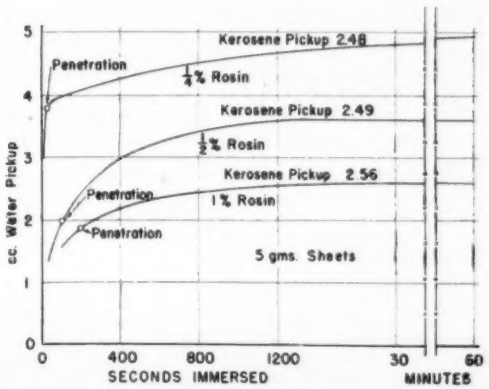


Figure 1

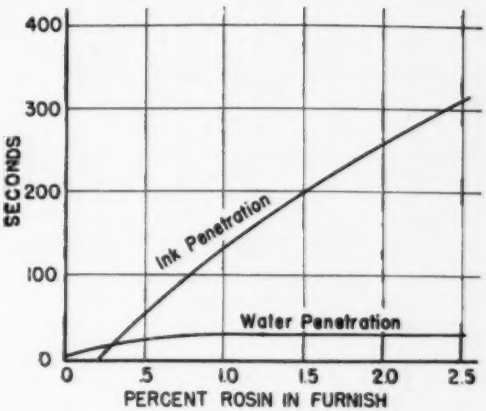


Figure 2

It has been suggested that the test may not be useful when only surface effects are of interest. Neither the suggestor nor the author has any experimental backing for his opinion. The wet break test measures sizing efficiency.

Sizing Properties

There are two major properties imparted to paper by engine sizing, namely, coagulating power and a very specific and limited type of water resistance.

To take up coagulating power first: there are usually several terms available for describing any phenomenon. The term coagulating power is used because the author spent some time investigating the theory of water clarification before he became interested in engine sizing. Had he been interested in dyeing, he would have used the term, substantive to negative colloids, instead of coagulating power because the fundamentals involved in mordanting, coagulating water, and engine sizing are identical. In all three cases, two dispersed cation exchangers or negative colloids are held together by polyvalent cations absorbed on end, in many cases common too, both exchangers or colloids.

In sizing then, the aluminum ion concentration binds the rosin to the fibers, assures the uniform distribution of the rosin particles, decides what the percentage reten-

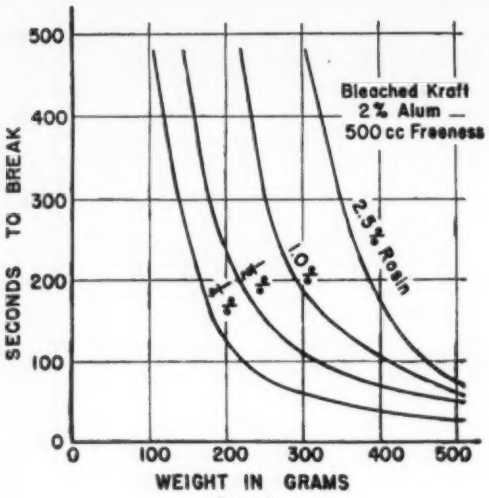


Figure 3

tion of rosin will be, imparts much more water resistance to the rosin than the rosin itself originally possessed, and finally it decides by the excess aluminum ions on the surfaces just what the coagulating power or substantivity for negative colloids will be on the finished sheet. The ink penetration test measures this excess coagulating power which is a result of the aluminum ion concentration in the white water at the moment

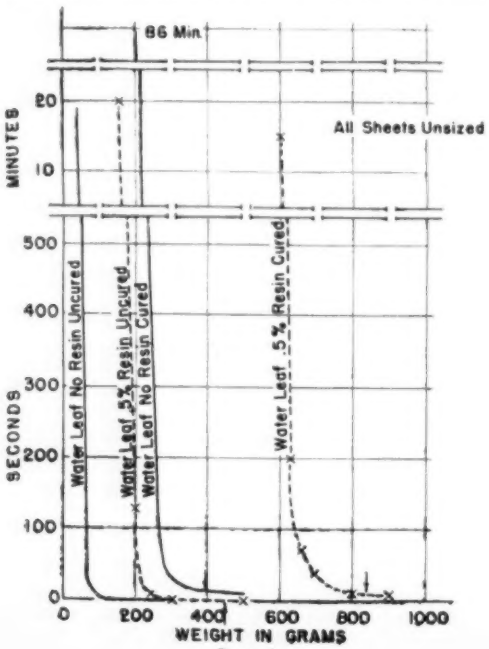


Figure 4

of sheet formation and consequently a measure of the real efficiency of the entire sizing process. Since it is a measure of the overall efficiency of the process, it is really a better relative measure of water resistance than most of the tests designed for that purpose. This is quite widely recognized because many mills seeking water resistance use the ink penetration test as a control.

Ink Penetration

Some peculiarities of the mechanism of an ink penetration test are not so widely known however. When the ink starts up through the paper the negatively charged ink dye particles are grabbed by the fibers and the clear ink liquid allowed to proceed upward by itself. In practically every case the coagulating power of the sheet can stop much more dye than is contained in a volume of ink equal to the volume of the sheet. As a result, the clear ink liquid goes to the top of the sheet and is evaporated off, thus permitting more ink containing dye to enter the bottom of the sheet. This process of evaporation off the top and entry of new dye at the bottom goes on until the coagulating power of the sheet is exhausted and the dye consequently shows up at the top or in other words, indicates the endpoint. It frequently happens that as much as ten times the volume

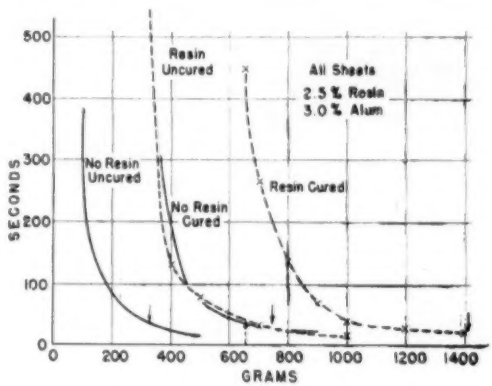


Figure 5

of the wettable pores of the sheet has to be evaporated off the top of the sheet. With such a tremendous dependence on evaporation it is small wonder that the test can be markedly changed with variations in temperature and humidity.

This coagulating power must exert considerable influence on the manner in which tub sizes and coating colors are laid down. Besides the ion concentration, coagulation is greatly influenced by the type of material, the pH, temperature, and so forth. To give useful information then, the colloid used in the ink would have to have characteristics similar to those of the size or color in question.

The water resistance, imparted by engine sizing, is more complicated and less clear cut than the coagulating power. A comparatively small amount of rosin will make the exterior surfaces of the fibers so hydrophobic that practically no water can get into the pores or capillaries between the fibers. The interior surfaces of the fibers are not waterproofed because the rosin particles

are too large to get inside the fibers. Thus the hydrophylic interiors of the fibers strive to get water and the hydrophobic exteriors of the fibers do everything possible to keep water away from them. The mechanism of the tricks resorted to by the interior of the fibers to smuggle water past the hydrophobic exterior is not known but it can be shown that additional sizing decreases the rate and the equilibrium amount of water taken up. Probably equilibrium never actually arrives although the rate becomes too small to measure except over a period of days.

An idea of the result of these differences is shown on Fig. 1 in which milliliters of water picked up by three different degrees of sizing on 5-gram hand sheets is plotted against time of immersion. The time at which the sugar dye endpoint occurs is indicated on each curve. This isn't quite correct because in this test the water is entering from both sides while in the penetration test the water is entering from one side only. However, three things stand out very prominently from these curves. The sheets are still picking up water after an hour's immersion. Identical endpoints represent entirely different amounts of absorbed water on different degrees of sizing. Depending upon the time of absorption, an entirely different relative amount of water pickup is obtained on the three sheets. Three more powerful indictments of the usual methods of testing water resistance would be hard to imagine.

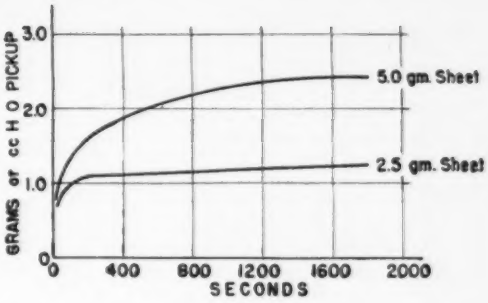


Figure 7

Figure 2 shows the ink and water penetration tests on the same series of sheets. The ink penetration test continues to rise as the amount of size is increased. The water penetration test rises rapidly at first and then flattens out into what were previously called the blind spot. This area is blind because the water penetration endpoints are too sensitive. Once the endpoint has arrived there is no indication of important changes that may be taking place thereafter. Papermakers know all about this because no one believing in a water penetration test would ever use over 1% rosin. Many mills use much more than this, knowing that they benefit by the additional amount.

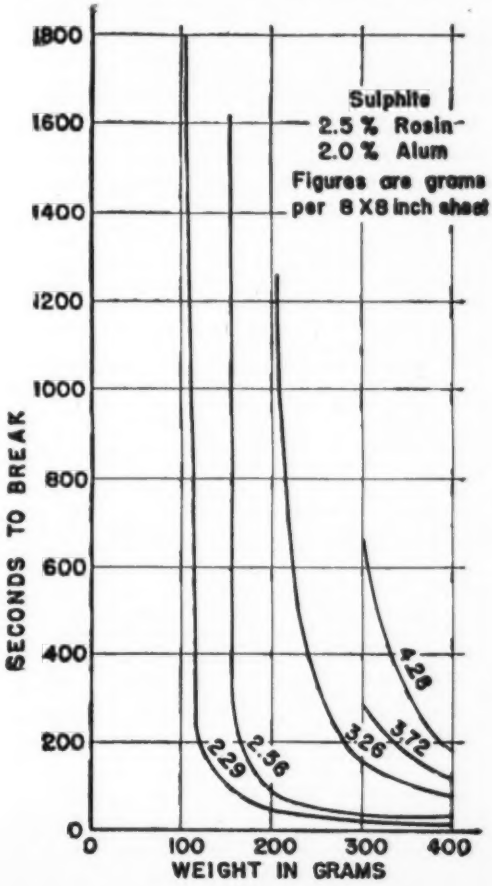


Figure 6

Wet Break Strength

As the paper imbibes water several important physical characteristics must change. The easiest thing to measure is tensile strength so 1.5 cm wide strips were immersed having various weights attached to the lower

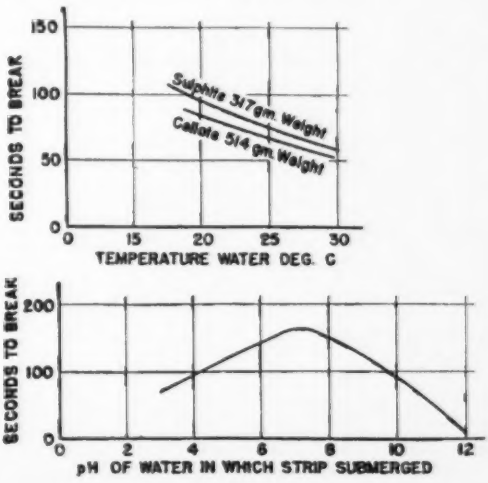


Figure 8

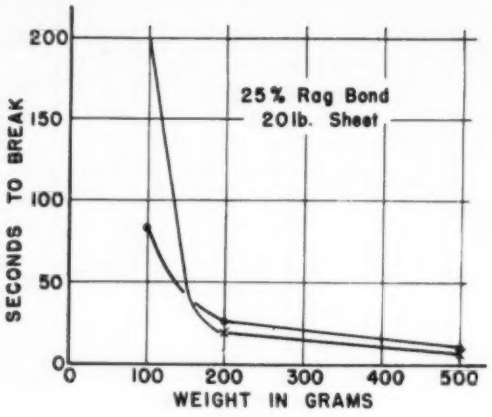


Figure 9

ends. The time at which each weight broke the strip was plotted against the weight used as in Fig. 3. Now, instead of measuring a very small increase in water pickup over a long period of time, a comparatively large time interval is measured for any given breaking weight or stress increase. Once the curve is plotted the time is known for any stress or the stress for any time. These curves were made when it was believed a water penetration test meant something. Actually these lines can be extended much farther upward and to the right by larger amounts of size and more efficient sizes. This same pulp has been made to support 317 grams for 2.5 days with no indication that this is the ultimate.

The maximum water penetration test that can be attained with this pulp and sheet weight is 45 seconds yet at 500 seconds by this test the 2.5% rosin sheet is three times as strong as the strip with 0.25% rosin which obviously from the slope of the line is still a long way from its irreducible minimum. Apparently the blind spot in the water penetration test is very large and very blind.

These lines seem to approach the vertical or to indicate some strength which no amount of soaking can reduce. This comes near being what might be idealized as wet strength. Some very preliminary data are shown on Figs. 4 and 5.

On Fig. 4 there are four curves but only two kinds of paper. Neither type of paper contains size or alum. The solid line at the left contains no resin. The dashed line at the left contains 0.5% of a wet strength resin. As expected, the wet strength resin has moved the line to the right. The other two lines are the same two papers cured 4 hours at 105°C.

Obviously curing does something besides curing the resin, because the cured paper, containing no resin, has more wet strength than the uncured paper that does contain resin. Naturally this applies only to the use of 0.5% resin. The author suspects that this is a case of irreversible dehydration of the fibers. They are thus made less hydrophylic or more water resistant. Heating a water leaf sheet greatly increases the contact angle shown by a drop of water placed on its surface.

At the bottom of Fig. 4 are four arrows. These represent the wet tensiles, for each type of sheet, made according to the standard TAPPI method except the soaking time was 1 hour. The difference between these arrows and the vertical part of the curves (which was believed to represent wet strength) is rather startling. Using the dashed right hand line as an example it must be concluded that after soaking an hour the strip will not break with an 830 gram weight, by the standard method, while on the wet break test 830 grams would break the strip after about 12 seconds immersion.

Figure 5 is the same type of data except that now all sheets are engine sized (2.5% rosin and 3% alum). The same results are obtained as before. Heating produces the same effect as wet strength resin because no resin cured is as well as 0.5% resin uncured. The wet tensile figures as shown by the arrows are in the same relative position to the nearly vertical parts of the curves. Again it takes an hour's soaking to reduce the wet tensile to 1400 grams according to the standard method but only 25 seconds to reduce the wet break test to 1400 grams.

The wet break test is obviously a much more severe test than the conventional wet tensile test. The difference is undoubtedly due to the fact that strain is as important as stress in determining the break. In the wet break test the strain due to the breaking stress is going on through the entire soaking period. In the wet tensile there is no strain during the soaking period and the strain due to the final breaking stress occurs only during a very short time interval. The wet break test seems more practical as one is generally interested in whether a full bag will break when wetted, rather than whether a wet bag will stand filling.

This heating of paper furnishes an excellent example of the different properties measured by different sizing tests. Long dehydration lowers the dry tensile strength but increases the wet break test tremendously (10 seconds to over 30 minutes in one case of long heating) because the sheet has become more waterproof. This waterproofnes was attained without aluminum ions and therefore with no increase in coagulating power. As a result there was no increase in the ink penetration test. Actually there was an appreciable decrease. Thus there is simultaneously a decrease in dry tensile, an increase in wet tensile, and a decrease in ink penetration.

Sheet Thickness

All sizing tests are so strongly influenced by thickness that nobody would attempt to compare sizing efficiency on two different thicknesses of sheet. However, Fig. 6 shows wet break curves on several different thicknesses of sheet made from the same furnish. Apparently this test is even more susceptible to thickness than the penetration type of test. However as far as these data go, it is obvious that the test measures sizing as readily on thick sheets as on thin ones.

There is some data, not the author's however, on commercially made board with weights in excess of 10 pounds which show that the wet break test can pick up differences in sizing efficiency even when sizing and dry tensile strength are varying in opposite directions. Speaking of directions, machine direction makes big differences in the numerical values of the wet break test but not in the relative sizing values of two sheets provided machine direction and cross grain direction are properly compared.

One doesn't make thick sheets on a Noble and Wood machine so the author had no experience with the Cobb

test which he understands was designed for thick sheets where one can't wait for penetration endpoints. Figure 7 shows the milliliters of water picked up plotted against time of immersion for 5 and 2.5 gram sheets made from the same furnish. Readings taken at any time along this curve would indicate that the 5 gram sheet had taken up more water or was more poorly sized than the 2.5 gram sheet. The penetration type tests would indicate more water resistance on the thicker sheet. The author wonders if this seeming anomaly has ever caused any disagreements or difficulties.

The difference can be easily explained on the basis that it is surface free energy that sucks water into a sheet of paper. The available free energy is as much a matter of amount of surface as of kind of surface and there is more of the same kind of surface in the thick sheet. This reasoning does not apply if the water front advances uniformly through the sheet because in that case the water is not affected by the excess surface ahead of it. However, if the advance is irregular every irregularity has more surface available on the thick than on the thin sheet.

Calendering

Calendering furnishes another peculiar anomaly. The capillaries are reduced in size which interposes more resistance to the flow of water and increases the penetration time. The mechanical work done on the sheet presumably rubs the sizing off the fibers so the equilibrium water pick-up is increased. The net result, strange as it may seem, is that calendering increases the penetration test but decreases the wet break test.

Just as in the standard sizing tests, temperature and the pH of the liquid make big differences in the wet break test. High water temperatures hydrolyze the aluminum ion to Al $(OH)_3$ and H^+ ions. Thus temperature destroys the sizing already on the sheet just as it prevents sizing originally on the machine. Figure 8 shows the effect of temperature on the wet break test.

Hydroxide ions react with aluminum ions to make $Al(OH)_3$, and hydrogen ions replace aluminum ions on the cation exchangers pulp and rosin. Obviously under these circumstances there will be an optimum pH where the sum total of damage from each ion will be at a minimum. This optimum is also shown on Fig. 8. The water penetration and Cobb tests would have the same optimum. The ink penetration test, because coagulation is involved, has a different and lower optimum. It must be remembered that this optimum applies only to pure water. All other cations and most anions can materially change it.

It would seem that one might set up what could be called specification or acceptance curves for any given type of paper. Points to the right or left of this curve would be above or below specification. Figure 9 shows two curves for the same kind of paper made in two different mills of the same paper company. It is interesting to speculate on whether the test is sufficiently sensitive to say that one mill did a better job of beating and the other a slightly better job of sizing.

Use of One Weight

Figure 10 is introduced for the benefit of anyone who tries the test with the idea that one weight is sufficient. One is undoubtedly sufficient if it happens to be the right one. The data show curves of rosin against time to break for a series of different weights. Obviously

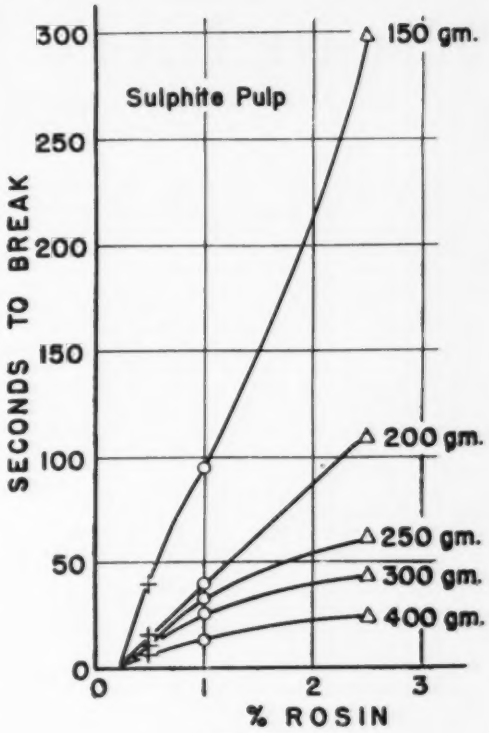


Figure 10

as the weight is increased the curve gets flatter or approaches the condition of having a blind spot just as in the water penetration test: and for exactly the same reason. The endpoint comes too soon or is to sensitive in the penetration test. In the wet break test the heavy weight breaks the strip before it is even reasonably wet. Too light a wight unnecessarily prolongs the test. The weight can be chosen to give any desired combination of sensitivity and speed. If this is checked occasionally against a curve of time against weights, the operator will know a lot more of what is going on than he does now with any other test.

Since the test measures the strength at all degrees of water penetration or wetness it follows that a series of layers should give a curve that is the resultant of the rate at which each layer loses its strength. This seems to be true experimentally as far as surface sizes are concerned. That is, the curve is simply moved upward and to the right. The amount of movement is a function of the type of surface size; being large in some cases and scarcely noticeable in others. The relative position of the curves for two sheets is very little changed by surface sizing although both curves may be quite a bit removed from their original position. Reasoning from analogy, multiple layer board should act the same way but there are, as yet, no experimental data to back up this personal opinion.

Adhesion Test for Microcrystalline Wax

By ANTHONY KINSEL and HANS SCHINDLER
Petrolia Laboratory, L. Sonneborn Sons, Inc., New York City

Microcrystalline waxes are distinguished from paraffin wax by their chemical structure and molecular weight which cause these waxes to exhibit several properties not possessed by paraffin wax. One of the most notable of these properties is the adhesion to paper and related substances which has been a major contributing factor to the increasing demand for this type of wax Microcrystalline wax is used in the manufacture of laminated papers as the main ingredient of the laminating composition and acts not only as an adhesive but also as moisture-vapor barrier in the finished laminate. Other properties which make microcrystalline wax desirable for this purpose are its flexibility at low temperatures and the absence of the phenomenon known as "sweating," i.e. separation of oil.

The selection of waxes for the purpose of laminating paper has proceeded entirely along empirical lines. This is not very surprising since microcrystalline wax manufacture dates only back to the end of the twenties and not much choice was possible as long as the amounts of these waxes available on the market were limited. By trial and error it was found that certain types of wax did suit the purpose and their physical properties, like melting point and penetration, were—for lack of other, more direct characterizations—used in the writing of specifications. It is clear that such a method of evaluating mycrocrystalline waxes is costly since it necessitates pilot plant runs. Usually it is not very reliable, if based on physical properties only unless a large number of comparative tests have been made to establish the correlation between physical properties and performance.

On the basis of these considerations the authors have developed a test for measuring directly the laminating properties of microcrystalline wax. This test has not only proven useful in selecting raw materials and processing methods for the manufacture of waxes for lamination of paper; it was also judged helpful by manufacturers of laminated glassine paper who are interested in predicting the performance of waxes and make selections accordingly.

In this test the adhesion of the wax is determined by measuring the force required to separate two pieces of cellophane, of exactly one square inch bonded surface, which are laminated to a third piece of cellophane coated on both sides with the wax to be tested. The Suter tensile strength tester was found suitable for this purpose. Lamination of the test specimens is carried out by passing a sheet of cellophane waxed on both sides and covered with two sheets of unwaxed cellophane through a set of heated rollers.

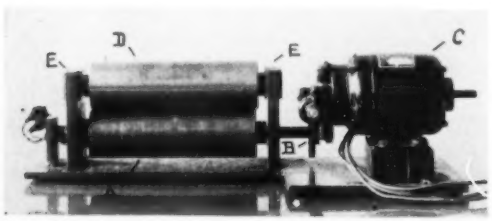


Figure 1

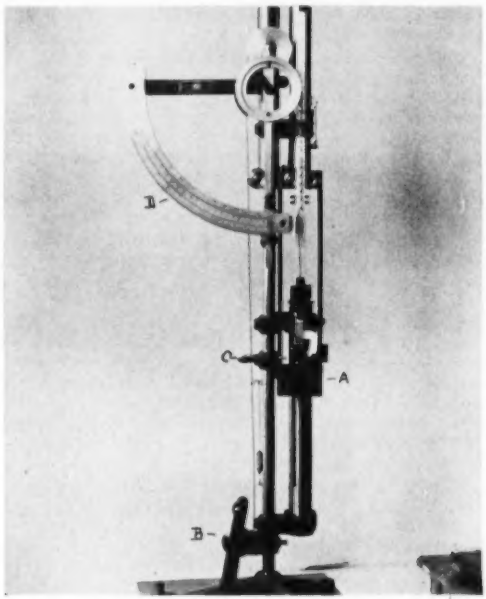


Figure 2

Cellophane has been chosen for the purpose of this test because its surface is practically nonabsorbent and therefore variations in test results caused by differences in the degree of penetration of wax into the paper are eliminated. This point has been clarified experimentally and reproducible results were consistently obtained with cellophane which consequently was chosen as standard test material. This method has been in use for development and routine control purposes at this laboratory for about one year.

A method of testing the adhesion of high molecular weight polymers very similar to the one described in this paper has been published recently by Hofrichter and McLaren *(1)*. Their procedure differs, however, in the preparation of the test specimens.

Apparatus

Rollers for Lamination

As mentioned above, lamination of a piece of cellophane, waxed on both sides, between two pieces of unwaxed cellophane, is accomplished by passing the three

pieces through the set of rollers shown in Fig. 1.

The lower roller, A, is hollow and is heated electrically by a heater consisting of an insulated brass cylinder (7 in. long, 2 in. diameter) wound with Nichrome wire (500 watt) which is inserted into the roller. The roller is driven through gears, B, by motor C at a speed of 2½ r.p.m. The temperature of the roller is measured by a thermocouple touching the roller surface and is controlled by a variable transformer.

The upper roll, D, is filled with lead and has a total weight of 8 pounds. It is not driven directly but moves through friction on the lower roll. It is also free to move in a vertical direction by means of the sliding bearings, E, in order to equalize distribution of the weight over the entire surface.

Adhesion Tester.

The test instrument proper consists of the Single Strand Strength and Elongation Tester 3A Table Model*. This model has been provided with suitable clamps for holding the test specimens. The tester assembled for use is shown in Fig. 2.

The Suter tester provides for a constant rate of pull on the test specimens by means of a hydraulic "brake" consisting of a plunger sliding in a cylinder filled with oil. The rate of pull most suitable for the Adhesion Test was found to be 3.5 in./min.

For operation, the carriage A to which the lower clamp is attached is moved to the upper position by means of the lever B; A is held in the upper position by the catch C. This catch is released at the start of a test and the carriage moves downward with uniform, predetermined speed. The force required to break the laminated bond is indicated in grams on the scale D.

Test Procedure

Preparation of Specimens

Heat a sample of wax kept in a shallow pan to 200°F. or 40° above the melting point, whichever is higher. Cut pieces of cellophane on a paper trimming board so as to obtain squares of 3.5 inches side length. Dip a cellophane square, held on one corner by crucible tongs, into the molten wax and coat both sides of the paper completely and uniformly. Remove the coated paper from the pan and hold it in the air until the wax solidifies which only requires a few seconds. Trim the edges of the coated paper on the paper trimming board so as to obtain a square of 3 inch side length. Cut two cellophane squares of 4 inch side length and place the coated square between the uncoated ones.

With one side up, pass the square through the rollers so that each edge leads in turn; then repeat this operation with the other side of the specimen up. Thus the specimen is passed through the rollers eight times. The temperature of the rollers shall be maintained at 10°F. below the melting point of the wax under test.

Cut the laminated paper square on the trimming board so as to obtain six squares each having exactly 1 square inch of laminated surface and a nonlaminated portion on one side of about 0.5 inch length. Place the squares in an air bath maintained at 77°F. and keep them at this temperature for 2 hours.

Adhesion Test

For making adhesion tests with the Suter tester, the carriage A is moved to its upper position by means of lever B, the specimens are fixed in the clamps, and catch C is released. Six specimens are tested and the results averaged. The figure obtained is rounded off to the nearest 5 since the scale on the tester cannot be read more accurately. The adhesion is reported as grams per square inch (linear).

Reproducibility and Accuracy of Adhesion Test

The reproducibility of the test was determined by making runs on the same wax on three consecutive days. Since these experiments were undertaken to investigate the soundness of the procedure, twelve specimens were usd for each run instead of the six specified for routine use. The results obtained are summarized in Table I.

Table I.—Reproducibility of Adhesion Test

Wax	Run No.	Adhesion, g./sq. in. (linear)	Deviation of Result from Average of Three Runs, %
A	1	320	6.7
	2	300	0.0
	3	280	6.7
	Average	300	
B	1	270	0.0
	2	265	1.9
	3	270	0.0
	Average	270	
C	1	120	7.7
	2	140	7.7
	3	140	7.7
	Average	133	

The data in Table I show that the reproducibility of the adhesion test is very satisfactory. They do not give any information about the internal consistency of the tests which comprise each run. This information is given in Table II for six different types of waxes. The standard deviation and coefficient of variation are calculated from the results obtained on twelve individual tests of the six different waxes. Further data on the accuracy of the method are given in Table II.

Table II.—Accuracy of Adhesion Test

Wax	Adhesion, g./sq. in. (linear)	Standard Deviation	Coefficient of Variation,* %
1	320	28.3	8.9
2	290	24.0	8.4
3	280	39.0	14.2
4	275	45.5	16.9
5	270	27.4	10.3
6	120	17.5	14.6
Average coefficient of variation			12.2%

* Per cent of average represented by standard deviation.

Application of Adhesion Test

After the soundness of the test method had been established the procedure was used to determine the adhesion of various waxes available commercially. The results of this study are given in Table III.

Table III.—Adhesion Test on Various Microcrystalline Waxes

Wax	Melting Point A.S.T.M. D127-30	Needle Pen A.S.T.M. D5-25	Color	Adhesion g./sq. in. (linear)
A	163.6	24	Yellow	320
B	155.4	24	Brown	295
C	168.0	27	Amber	290
D	157.6	21	Amber	270
E	168.6	30	Brown	270
F	164.7	22	White	270
G	150.8	24	Brown	235
H	163.0	25	Amber	235
I	149.3	38	Brown	185
J	146.0	41	Amber	120
K	191.2	7	Amber	45
L	134.0	15	White	0

Examination of the above table shows that considerable differences in bonding properties exist between

* Manufactured by Alfred Suter, 200 Fifth Avenue, New York, N. Y.

various grades of microcrystalline waxes in spite of their similarity in melting point and penetration. The low adhesion of the high melting, hard wax K should be noted. Paraffin wax has been included in the tabulation in order to show the fundamental difference between microcrystalline and macrocrystalline wax with respect to adhesion; it will be seen that wax L which is paraffin wax has zero adhesion.

While the test was primarily devised to guide the manufacture of waxes suitable for laminating it has been found useful for the selection of appropriate materials by consumers in the paper processing field. A set of laminating mixtures submitted by a mill producing and laminating glassine papers was tested and the results obtained were found to be in satisfactory agreement with the practical experience on the performance of the mixtures.

The sensitivity of the adhesion test to changes in the composition of the laminant is brought out very well by the tests on the various laminating mixtures. It is believed that the procedure will be found useful in the development of special laminating waxes and that it will insure uniformity of the materials which have already been found satisfactory.

Table IV.—Adhesion Test on Laminating Mixtures

Sample	Concentration of Plasticizer, %	Adhesion g./sq. in. (linear)
1	2	260
2	5	175
3	10	180
4	15	140
5	20	75

Note: In its evaluation of these results, the glassine paper producer stated that the small discrepancy in the results obtained on samples 2 and 3—whose order should have been reverse—may be due to lack of uniformity of dispersion of plasticizer throughout the sample.

Literature Cited

1. C. H. Hofrichter, Jr., and A. D. McLaren, *Ind. Eng. Chem.* 40, 329 (1948).

INDUSTRIAL PRODUCTION, BY INDUSTRIES

(Without Seasonal Adjustment)

[Index numbers of the Board of Governors, 1935-39 average = 100]
Source: Federal Reserve Bulletin, January, 1949

Industry	1947 Nov.	1947 Dec.	1948 Jan.	1948 Feb.	1948 Mar.	1948 Apr.	1948 May	1948 June	1948 July	1948 Aug.	1948 Sept.	1948 Oct.	1948 Nov.
Paper and Paper Products	*165*	*157*	*163*	*163*	*167*	*169*	*170*	*165*	*149*	*165*	*165*	*172*	*169*
Paper and pulp	160	152	157	159	160	163	164	160	145	160	159	167	163
Pulp	182	168	174	178	179	182	188	183	170	191	181	194	189
Groundwood pulp	103	97	91	98	96	107	112	107	104	107	103	109	110
Soda pulp	112	107	109	110	103	108	112	111	96	110	107	111	107
Sulphate pulp	281	255	276	269	285	293	309	301	283	328	301	330	317
Sulphite pulp	159	148	151	161	153	151	151	146	135	148	145	153	149
Paper	156	150	155	156	157	160	160	156	141	155	156	163	159
Paper board	186	177	187	179	192	192	191	187	165	184	189	193	195
Fine paper[2]	89	86	86	88	85	87	86	86	74	83	83	81	75
Printing paper	168	162	162	170	161	166	169	168	150	160	161	172	165
Tissue and absorbent paper	158	153	161	167	161	173	169	160	153	161	163	172	162
Wrapping paper	146	139	145	150	148	151	150	145	135	153	148	157	150
Newsprint	91	87	82	83	82	91	95	95	91	95	93	96	95
Paperboard containers (same as Paperboard)	...	...	...	...	...	...	...	...	...	...	...	...	...

p Preliminary. *r* Revised. [1]Series included in total and group indexes but not available for publication separately.
[2] This series is in process of revision.

Note.—For description and back figures, see Bulletin for October 1943, pp. 940-984, September 1941, pp. 878-881 and 933-937, and August 1940, pp. 753-771 and 825-882.

HOURS AND EARNINGS OF PRODUCTION WORKERS IN MANUFACTURING INDUSTRIES

[Compiled by the Bureau of Labor Statistics]

Industry group	Average hours worked per week: 1947 Sept.	1947 Oct.	1948 June	1948 July	1948 Aug.	1948 Sept.	1948 Oct.	Average hourly earnings (dollars per hour): 1947 Sept.	1947 Oct.	1948 June	1948 July	1948 Aug.	1948 Sept.	1948 Oct.
All manufacturing	*40.4*	*40.6*	*40.2*	*39.8*	*40.1*	*39.8*	*39.9*	*1.249*	*1.258*	*1.315*	*1.332*	*1.349*	*1.362*	*1.366*
Durable goods	*40.6*	*40.9*	*40.5*	*40.0*	*40.7*	*40.0*	*40.7*	*1.331*	*1.337*	*1.385*	*1.407*	*1.431*	*1.440*	*1.451*
Nondurable goods	*40.2*	*40.2*	*39.8*	*39.5*	*39.5*	*39.6*	*39.1*	*1.165*	*1.175*	*1.242*	*1.252*	*1.262*	*1.272*	*1.272*

Note.—Preliminary November 1948 figures for average weekly hours and hourly earnings are: All manufacturing, 39.8 and 1.373; Durable, 40.4 and 1.452; Nondurable, 39.2 and 1.280, respectively. Back figures are available from the Bureau of Labor Statistics.

FACTORY EMPLOYMENT AND PAY ROLLS, BY INDUSTRIES

(Without Seasonal Adjustment)

[Index numbers of the Bureau of Labor Statistics, 1939 = 100]

Industry group or industry	Factory employment: 1947 Oct.	1947 Nov.	1948 July	1948 Aug.	1948 Sept.	1948 Oct.	1948 Nov.	Factory pay rolls: 1947 Sept.	1947 Oct.	1948 Nov.	1948 July	1948 Aug.	1948 Sept.	1948 Oct.
Paper and Allied Products	*147.8*	*148.6*	*146.1*	*148.6*	*149.8*	*151.0*	*151.6*	*315.5*	*320.5*	*325.9*	*341.7*	*352.1*	*355.0*	*357.4*
Paper and pulp	145	146	149	150	150	150	...	322	323	325	358	364	363	359
Paper goods, n.e.c.	167	168	160	164	166	168	....	334	344	353	355	365	372	381
Paper boxes	142	143	131	137	140	144	....	292	304	315	295	319	328	342

Trends

Office of the PAPER TRADE JOURNAL,
Wednesday, February 2, 1949.

From the assortment of current opinions on business trends, a few facts seem to be gaining fixity. Accepted first is that consumer buying has ended for millions of families because their spendable income has been reduced by fixed charges against their income. A heavy demand continues to exist in a lower-price field, however, and consumer demand demonstrates its sensitiveness to price cuts.

Evidence of the latter statements appears in the upturn in department store sales in January, thinks one economist, for where goods were cut in price—often below replacement cost—the result was a sales spurt. That an upturn in dollar sales volume was registered despite price cuts indicated a significant jump in unit sales. And since consumer buying is concluded to have been stimulated by price reductions, the question is raised: In what price range does the heavy demand still exist?

During 1948, home mortgages increased by $6,000,000,000 and credit obligations increased by $2,656,000,000, says Chemical Bank's "Trends". "Carrying charges on this debt have reduced the spendable income of the public." To the extent that millions of families have thus increased the fixed charges against their incomes, they are out of the market for additional consumer and durable goods.

Trend of January business showed a general decline, judging from back-order schedules, a further reduction in production, and a pronounced declining trend in prices, reports the Business Survey Committee of the National Association of Purchasing Agents. On the other side, Dun and Bradstreet's Trade Review for the week ended January 27 showed the volume of wholesale orders steady and high, though the total dollar volume dipped fractionally below the corresponding week, 1948. Production was reported up fractionally in many industries, manufacturing output moderately surpassing 1948's period; steel ingot set a new all-time record, automobile production rose about 4 percent and exceeded the output in similar week of 1948 by nearly 3 percent. Civil engineering construction for the week amounted to $212,157,000, more than twice that of the previous week. Lumber production increased about 8 percent in the week ended January 15 but fell below the level of 1948's week by 29 percent. Shipments of lumber were nearly 10 percent above production, and new orders surpassed production by 17 percent. Continued claims for unemployment insurance rose about 15 percent, and initial claims increased approximately 22 percent in the week ended January 8.

Healthiest trend shown by the January survey of the ANPA is that industrial inventories are keeping in balance with lower production activity. The present situation is seen as calling for extreme caution, the report indicates.

Per Capita Gains

Latest statistics furnished by AP & PA reveal per capita paper consumption for 1948 at an estimated 356.9 lbs., an increase of 14 lbs. over 1947, and of 302 lbs. per person during the past fifty years. Some 66 pounds of this total represents newspapers; 156 pounds, paperboard products, wrapping paper and bags. The balance is made up of books, letter paper, tickets, catalogs, tissues, rugs, curtains and upholstery covers, etc.

During the last two years, the population of the U.S. has increased more than 6,000,000. Revised estimates of 1950 population gains put the figure at 149,000,000. Figures released by the National Industrial Conference Board show the U.S. population increased 14,000,000 from 1941 through 1948 inclusive, compared with 9,000,000 in the entire decade preceding.

Wood Pulp

U. S. paper and paperboard mills operating at close to capacity levels are said to be absorbing the entire output of U.S. and Canadian pulp mills. Buying for first quarter requirements is understood to be a steady absorption of commitments at contract price levels, also to include some shopping for added tonnages to meet current needs. The domestic pulp market on regular grades is described as strong, with prices firm on adjusted levels for bleached and unbleached, quality for quality.

Inventories of market pulp consumers are reported to be still a little top-heavy, weighed against the softened undertone of Scandinavian markets.

Writing Paper

Readjustment of mill orders to lowered levels of consumer demand is said to be accomplished in the writing paper field. Production is estimated at 80 to 85 percent ratio of capacity, with the general range of mill operation at five to six days, some at seven, a number at four. Availability of adequate market pulp marks the return to prewar standards of quality. Strengthening of the rag content field was noted in early January.

Also about completed is liquidation of printer and consumer inventories which had been stockpiled during war scarcities. Marketing of dealer overstocks, many of substandard quality, has brought in reports of general price declines. And while the lowered price of wood pulp and the softened rag market has temporarily put the non-integrated mills in a more favorable position costwise to meet competition, no immediate reduction in price of writing papers is foreseen, in view of other continuing high production costs.

Table I
Overseas Newsprint Imports

	Eleven Months	
	1948	1947
Finland	113,005	77,901
Sweden	60,301	19,101
Norway	24,524	5,765
Poland	1	1,645
Austria	27,359	8,122
Netherlands	1,178	1,804
United Kingdom	2,123	.....
Italy	666	.....
Belgium	159	.....
Total Tons	234,625	114,740

Newsprint

Finland's prewar customers can count on increased newsprint tonnages month by month through 1949, with even better prospects for 1950, U.S. representatives state. New electric power has begun to flow, and by the end of 1949 it is fairly certain their power supply will exceed that lost in ceded territory, and their production troubles solved.

Capacity of Finnish mills will, as traditionally, go to long-term, pre-war contract customers; none reaches the spot market. Price meets the Canadian contract price c.i.f. on long-term basis, the only exceptions being made to some older buyers who offered temporary inducement to secure increased tonnages on a long-term arrangement.

Indexes

Index of general business activity for the week ended January 22 inclined to 154.7 from 154.6 in the preceding week, compared with 156.1 in the corresponding week of 1948. Index of paperboard production fell to 193.7 from 201.2 in the preceding week, compared with 190.5 in the corresponding week of 1948.

Comparative ratios of U.S. paper and paperboard production to mill capacity, as reported by AP & PA are:

	Jan. 22 1949	Jan. 15 1949	Jan. 24 1948	Jan. 25 1947	Jan. 26 1946
Paper**	96.4	294.8	101.1	103.7	94.5
Paperboard	92.0	93.0	104.0	101.0	94.0

** Capacity in tons, 177,680; 1948, 172,008.

Paperboard Production (Tons)

	Jan. 22 1949	Jan. 15 1949	Jan. 24 1948
Production	191,306	194,092	188,002
New Orders	182,892	172,225	188,717
Unfilled Orders	327,700	337,149	423,160

Percent of Activity, Current, 92%; Year, 88%.

Imports

Week Ending Jan. 29

NEW YORK

Newsprint

N. Y. Post Corp., Vibeke Maersk, Havre, 669 rolls.
N. Y. Journal American, Markland, Liverpool, 574 rolls.
Daily Mirror, Markland, Liverpool, 192 rolls.
N. Y. Herald Tribune, Markland, Liverpool, 1733 rolls.
Brooklyn Eagle, Markland, Liverpool, 645 rolls.
Herald Statesman Inc., Markland, Liverpool, 42 rolls.
Washington Post, Markland, Liverpool, 2834 rolls.
Alexandria Gazette, Markland, Liverpool, 30 rolls.
The Sun, Markland, Liverpool, 16 rolls.
Washington Daily News, Markland, Liverpool, 802 rolls.

Printing Paper

Olympic Shipping Co., American Scientist, Havre, 25 cs.

Wallpaper

Intramar Shipping Co., American Scientist, Havre, 1 cs.
Hudson Shipping Co., American Scientist, Havre, 3 pkgs.
C. A. Haynes Co., American Press, London, 49 crates.

Tracing Cloth

Keuffel & Esser Co., American Traveler, Manchester, 8 cs. (bleached cotton).
Keuffel & Esser Co., American Clipper, Manchester, 25 cs. (bleached cotton).

Drawing Paper

Halperin Shipping Co., American Press, London, 3 cs.

Filter Paper

(———), Agwistar, Vera Cruz, 1 cs.

Photo Paper

Lep Transport Inc., American Press, London, 1 drum (base).

Napkins (paper)

H. W. Robinson Co., American Press, London, 1 cs.

Gummed Paper

B. F. Drakenfeld & Co., American Clipper, Liverpool, 75 cs.

Tissue Paper

B. F. Drakenfeld & Co., American Clipper, Liverpool, 9 cs. (pottery), 23 cs.
B. F. Drakenfeld & Co., American Manufacturer, Liverpool, 2 cs. (gauze stereotyping).

Parchment

Gerhard & Hey, Queen Mary, Southampton, 1 cs.
Andrews Paper Co., Queen Mary, Southampton, 1 cs.

Strawboard

Premier Decorations Inc., Aalsdyk, Rotterdam, 20 bls.

Rags, Baggings, Etc.

A. de Vries Trading Corp., American Scientist, Havre, 70 bls. scrap bagging.
Chase National Bank, American Traveler, Manchester, 11 bls. wool rags.
American Express Co., American Clipper, Manchester, 10 bls. hosiery clips, 17 bls. wool thread waste.
Castle & Overton, Inc., Exchester, Trieste, 246 bls. bagging waste.
Midwest Waste Material Co., Kim, Havre, 69 bls. rags.
E. J. Keller Co., Inc., Kim, Havre, 63 bls. rags.
Brandwein Mazur Co., Kim, Havre, 163 bls. cotton waste.
W. C. Jones, Kim, Havre, 62 bls. cotton waste.
Ayres W. C. Jones, Kim, Havre, 62 bls. cotton waste.
J. J. Rozendaal, Kim, Dunkirk, 348 bls. cotton waste.
New England Waste Co., Flying Independent, Antwerp, 1520 bls. cotton linters.
Loumar Textile By Products, Exmouth, Venice, 100 bls. rags.
1st National Bank of Boston, Exmouth, Bari, 73 bls. jute bagging.
National City Bank, Exmouth, Leghorn, 146 bls. old jute bagging.
Royal Manufacturing Co., Aalsdyk, Rotterdam, 45 bls. cotton waste.
Irving Trust Co., Aalsdyk, Rotterdam, 109 bls. old bagging.
E. J. Keller Co., Inc., Mormacgulf, Shanghai, 45 bls. bagging, 39 bls. waste bagging.
New England Waste Co., Mormacgulf, Shanghai, 300 bls. cotton waste.
A. de Vries Trading Corp., Vibeke Maersk, Havre, 49 bls. rags.
New England Waste Co., Flying Cloud, Bombay, 100 bls. cotton waste.
(———), Flying Cloud, Bombay, 100 bls. jute rags.
Camden Fibre Mills, Flying Cloud, Bombay, 100 bls. cotton waste.
M. O. Schimmel, Flying Cloud, Bombay, 100 bls. cotton waste.
Brandwein Mazur Co., Flying Cloud, Bombay, 500 bls. cotton waste.
W. Steck, Flying Cloud, Bombay, 100 bls. old jute rags.
Buffalo Batt & Felt Corp., Flying Cloud, Bombay, 140 bls. cotton waste.
Cowa Co., Flying Cloud, Bombay, 65 bls. cotton waste.
C. Comiter, Flying Cloud, Bombay, 30 bls. old jute rags.
Midwest Waste Material Co., Blommersdyk, Antwerp, 47 bls. scrap bagging.
A. de Vries Trading Corp., Elizabeth, Antwerp, 61 bls. scrap bagging.
(———), Thulin, Alexandria, 89 bls. old bagging.
Cannstadt Trading Co., Thulin, Naples, 28 bls. jute waste.

Gluestock

Manufacturers Trust Co., Seatrain, Havana, 85 bls.
H. Remis, Cape Cod, Barranquilla, 200 rolls.
Transatlantic Animal By Products, Mormacpine, Buenos Aires, 92 bls.
Bank of New York Trust Co., Agwidale, Havana, 218 bls.

BOSTON

Leigh Textile Co., American Scientist, Havre, 49 bls. mixed bagging.
(———), Rio Araza, Buenos Aires, 1000 bags casein.
International Purchasing Co., Elizabeth, Antwerp, 60 coils old rope.
Irving Trust Co., Elizabeth, Rotterdam, 110 bls. gluestock.

PHILADELPHIA

1st National Bank of Boston, American Clipper, Manchester, 74 bls. bagging.

BALTIMORE

Central National Corp., Vibeke Maersk, Rouen, 242 rolls paper.
Cincinnati Enquirer, Blommersdyk, Rotterdam, 232 rolls newsprint.
1st National Bank of Boston, (Toledo), Blommersdyk, Rotterdam, 387 rolls newsprint.
J. J. Rozendaal, Elizabeth, Antwerp, 156 bls. cotton waste.

To Seek Foreign Markets

WASHINGTON.—The output of alkalies, soda ash and caustic soda probably will be ample for all domestic requirements and for United States producers to seek their share of foreign markets in the current year, the Department of Commerce forecast this week.

In a survey of chemicals production prospects for the year, the department said:

"Demand for chlorine for manufacture of chlorinated hydrocarbons and other chemicals will utilize the full output of present facilities and proposed expansions.

"Operation of these facilities will insure a large supply of electrolytic caustic soda which is expected to maintain its lead over the lesser quantities produced from soda ash."

Trade Agreement Report

WASHINGTON.—The extent to which United States duties have been modified under the Trade Agreements Act, and other pertinent information on the trade agreements, is covered in the first report to be issued by the Tariff Commission on the operation of the Trade Agreements Program. The report is a revision of a preliminary summary issued during 1948. In addition to other facts, it covers the amount of trade, both export and import, with trade agreement countries and those outside of the agreements.

Norway's Logging Hit

WASHINGTON — Unusual weather, marked by moderate temperatures and little snow, may interfere with the 1948-49 logging program in Norway, according to a Norwegian news bulletin here.

While the conditions may make for a record timber fall, it is reported, and half of the projected 7,000,000 cubic meters was already on the ground at the year-end, the light snowfall made it impossible to haul the cut from the woods.

U. S. Wood Pulp Imports, January - December, 1948 - 1947

Total wood pulp imports, based on data received from the Bureau of the Census, for 1948, in comparison to imports during 1947, are as follows:

	1948*	1947*	Per Cent
Canada	1,593,543	1,522,759	+ 5
Newfoundland and Labrador	7,137	7,854	— 9
Mexico	1,054	7,342	—86
TOTAL NORTH AMERICA	1,601,734	1,537,955	+ 4
Sweden	384,583	555,215	—31
Finland	175,900	223,973	—21
Norway	13,218	9,577	+38
Russia	.....	4,928	....
Austria	424	.....	....
TOTAL EUROPE	574,125	793,693	—28
TOTAL WORLD	2,175,859	2,331,648	— 7

* Short tons.

Prices

Quotations indicate trends in an open market. At the moment they can be of little more value. While some volume business still is done under contract at the figures shown, fluctuations are too varied and frequent to permit prices to be interpreted as representing a wholly stabilized market.

NEW YORK

Paper

Delivered New York

STANDARD NEWS, per ton—

Rolls, contract	$100.00/	—
Sheets	115.00/	—

F.o.b. mill, varying freight allowances, Zone 1.

KRAFT—per cwt., 40# base wgt.

No. 1 Wrapping	7.75/	8.00
Standard Wrapping Rolls	7.00/	—
Standard Wrapping Sheets	7.50/	—
Standard Bag	6.50/	—
Multiwall Bag, 40# and heavier, 24x36 (500 sheets)		
Southern	7.50/	7.75
Northern	9.90/	10.15

TISSUES—Per Ream 24x36 (480) 10/11 lbs.

Wh. No. 1 Frd.	$1.84/	$2.00
Wh. No. 1 M. G.	1.94/	2.00
Wh. No. 1½	1.65/	—
Wh. No. 2	1.50/	1.60
Kraft Anti-Tar	1.65/	—
Kraft Unbl.	1.85/	—
Shred. Wh. No. 1 per lb.	.12¾/	.18

TOILET—Per Case of 100 rolls—1 M Sheets.

Unbleached 4½x4½	$7.20/	—
Bleached 4½x4½	8.00/	—
Bleached 4½x5	8.45/	8.75
Per Case of 50 rolls—1500 sheets		
Unbleached 4½x4½	$5.70/	—
Per Case of 50 rolls—2000 sheets		
Unbleached 4½x4½	$6.95/	—
Bleached 4½x4½	7.70/	—

PAPER TOWELS—Per Case of 3750—Zone 1.

Wh. Jr. M'tif'd 9¼x9½	$5.45
Br. Sr. M'tif'd 10x12	3.80
Br. Jr. M'tif'd 9½x9¼	3.30
Br. Jr. Sgl. fold 10x10¼	3.35

MANILA, per cwt.

No. 1 Jute Tag, sheets*	$15.05/	—
Reg. Jute M.F. Manila, sheets*	13.50/	15.50
No. 1 Manila Wrapping	8.75/	10.50
Printing Manila	10.00/	11.00

* Less usual allowance for rolls.

BOARDS, per ton—

Filled News	$80.00/	$82.50
Plain Chip	80.00/	—
Blchd. Mla. L-d. Chip*	105.00/	
White Pat. coated*	120.00/	
Kraft Liners 42 lb.	105.00/	
Kraft Corr. .009	110.00/	
Binders Boards	120.00/	126.00

* Base Prices per 10 tons. Less than 10 tons but over 3 tons, add $2.50; three tons or less, add $5; regular 35-39 basis, add $5; basis 40-49, add $2.50; basis 91-100, add $2.50; basis 101-120, add $5.

The following prices are representative of distributors' resale prices, all deliveries in Zone 1:

RAG CONTENT BONDS AND LEDGERS—

White, 16 lb.

BONDS, per cwt.

	Carton	4 C't'n	Ton
100% Rag Ext. No. 1	$59.00	$54.55	$52.30
100% Rag	52.25	48.30	46.30
75% Rag	41.50	38.30	36.70
50% Rag	33.75	30.70	29.50
25% Rag	30.25	27.45	26.35

LEDGERS, per cwt.

100% Rag Ext. No. 1	$57.00	$52.65	$50.50
100% Rag	50.25	46.40	44.50
75% Rag	41.50	38.30	36.70
50% Rag	33.75	30.70	29.50
25% Rag	30.25	27.45	26.35

SULPHITE BONDS AND LEDGERS—

White, 16 lbs.

BONDS, per cwt.

No. 1	$21.25	$19.25	$18.50
No. 2	20.25	18.30	17.55
No. 4	19.25	17.55	16.85

LEDGERS, per cwt.—

No. 1	$21.75	$19.65	$18.85
No. 2	20.75	18.75	18.05
No. 4	20.00	18.10	17.35

WHITE BOOK, per cwt.—

	Case	Ton
Coated		
No. 1 Glossy	$20.90	$20.15
No. 2 Glossy	19.65	18.90
No. 3 Glossy	18.90	18.25
Machine Coated	16.65 to 17.15	16.05 to 16.35
Uncoated		
No. 1 Antique (Watermarked)	16.40	15.80
Offset	15.15 to 17.15	14.60 to 16.40
A Grade E. F.	15.40	14.85
A Grade S. C.	15.90	15.35
B Grade E. F.	15.15	14.55
B Grade S. C.	15.65	14.95

Twines

All Prices Nominal, F.o.b. Mill

(Soft Fiber)

Coarse Polished—India	.35½/	.36¼
Fine Polished India	.41½/	.45
Unpolished—Paper Makers	.32¾/	.34½
Tube Rope	.33¾/	.35½
Wrapping	.36 /	.38¾
Cotton	.58 /	.60
Polished Cotton	.55 /	—
(Hard Fiber)		
Mex. Sisal	.21 /	.27
Manila (Reprocessed)	.31 /	.35
(American Hemp)		
Polished Hemp	.46½/	.48
Unpolished	.35 /	.37¼

World Wood Pulp Markets at a Glance

First Quarter Contract Prices, Per Short Air-Dry Ton

	Delivered, with varying freight allowances		On dock Atlantic Ports		
	U. S.	Canadian	Swedish	Finnish	Norwegian
Groundwood	$80.00/ —	$80.00/ —			
Siderums Pulping News		80.00/ 90.00			
Soda, Bleached	130.00/135.00	130.00/ —			
Sulphate, Bleached	136.00/145.00	147.50/150.00	$150.00/ —		
Sulphate, Unbl'd North'n	115.00/125.00	115.00/125.00	127.50/ —	127.50/ —	
Sulphate, Unbl'd South'n	105.00/115.00				
Sulphite, Blchd. (S'ftw'd)	126.00/135.00	135.00/ —	140.00/165.00	165.00/ —	140.00/165.00
Sulphite, Blchd. (H'dw'd)	125.00/145.00				
Sulphite, Unbleached	118.00/ —	125.00/ —	135.00/140.00	140.00/143.00	
Sulphite, Unbl'd (Glassine) (Varying frt. allowances)	120.00/ —	130.00/ —			
Sulphite, Unbl'd (Glassine) (No freight allowed)		118.00/ —			

Waste Paper Market

Base Prices to Mills for Average Packings

F.O.B. Shipping Point (Per Ton)

	New York Feb. 1	Philadelphia Jan. 31	Boston Jan. 29	Chicago Dec. 1
No. 1 Hd. Wht. Env. Cuts	$95.00/100.00	$90.00/ 95.00	$90.00/105.00	$100.00/ ——
No. 1 Hd. Wht. Shvs., unr'l'd	80.00/ 85.00	65.00/ 70.00	80.00/ ——	90.00/ ——
Super Soft Whit. Shvs.	80.00/ 85.00	70.00/ 75.00	80.00/110.00	
No. 1 Soft Wht. Shvs.	60.00/ 65.00	50.00/ 55.00	70.00/ 80.00	50.00/ 55.00
No. 1 Fly Leaf Shvs.	40.00/ ——	20.00/ 25.00	35.00/ 40.00	
No. 1 Gdwd. Fly Leaf Shvs.	20.00/ 30.00	15.00/ 20.00	25.00/ ——	
No. 1 Heavy Books & Mag.	17.00/ 19.00	17.00/ 20.00	22.00/ 25.00	28.00/ 30.00
Mixed Books	9.00/ 11.00	9.00/ 10.00	12.00/ ——	
No. 1 Wht. Ledger	32.50/ 35.00	35.00/ 40.00	45.00/ 50.00	30.00/ ——
Colored Ledger	35.00/ 40.00	25.00/ 30.00	37.50/ ——	
Manila Tab. Cards	50.00/ 55.00	50.00/ 55.00	65.00/ 75.00	
New Manila Env. Cuts	65.00/ 75.00	60.00/ 65.00	60.00/ 70.00	
Extra Manilas	20.00/ 25.00	20.00/ 25.00	20.00/ 35.00	
Mxd. Kraft, Bag Cuts	45.00/ 55.00	45.00/ 50.00	70.00/ ——	
Kraft Envelope Cuts	65.00/ 70.00	75.00/ 80.00	70.00/ 75.00	70.00/ ——
Trpl. Std. No. 1 Brn. Sft. Kraft	35.00/ 40.00	30.00/ 35.00	40.00/ 45.00	
New Kraft Corr. Cuts	30.00/ 35.00	25.00/ 30.00	45.00/ ——	
No. 1 Asstd. Old Kraft	30.00/ 35.00	25.00/ 30.00	25.00/ ——	20.00/ ——
Used Kraft Bags	30.00/ 35.00	15.00/ 18.00	30.00/ ——	
New Jute Corr. Cuts	18.00/ ——	20.00/ ——	16.00/ ——	
Old Corrugated	14.00/ 15.00	13.00/ 15.00	13.00/ 14.00	14.00/ ——
No. 1 News	12.00/ 14.00	8.00/ 10.00	11.00/ 12.00	—— / 15.00
No. 1 Mixed Paper	4.00/ 5.00	4.00/ 6.00	—— / 7.00	8.00/ ——
Box Board Cuts	6.00/ 7.00	4.00/ 5.00	10.00/ ——	
White Blank News	60.00/ 65.00	55.00/ 60.00	—— / 60.00	45.00/ ——
Overissue News	17.00/ 18.00	12.00/ 14.00	11.00/ 12.00	18.00/ ——
Sulphite Mill Wrappers	12.00/ 14.00	6.00/ 8.00	15.00/ ——	11.00/ ——

Rag Market

New Domestic Cotton Cuttings

(Prices to Dealers, F.o.b. Ship. Pt.)

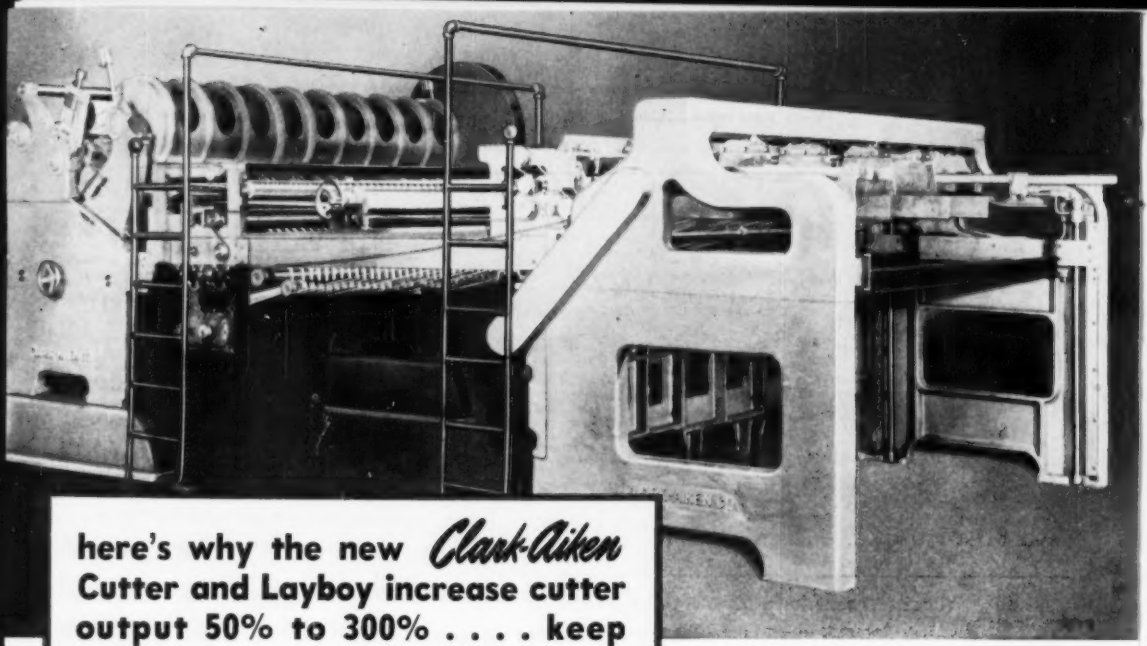
White Shirt	$10.00/	$10.50
Unbleached Muslin	10.00/	10.50
Light Silesias	7.00/	7.50
White Back Blue Overalls	5.50/	6.00
Blue Overalls	5.00/	5.50
Fancy Shirt	4.50/	5.00
Percales	5.50/	6.00
Light Prints	5.50/	6.00
No. 1 Washables	2.75/	3.00
Bleachable Khaki	5.00/	5.50
Unbleachable Khaki	4.50/	5.00
Cottonades	4.25/	4.75
Lt. Flannelettes	7.00/	7.50
Men's Corduroy	3.50/	4.00
Women's Corduroy	3.00/	3.50

Old Domestic Cotton Rags

(Prices to Dealers, F.o.b. Ship. Pt.)

	Per 100 lbs.	
No. 1 Whites, Repacked	$4.50/	$5.00
No. 1 Whites, Miscellaneous	3.50/	4.00
No. 2 Whites, Repacked	2.75/	3.00

(Continued on page 28)



here's why the new *Clark-Aiken* Cutter and Layboy increase cutter output 50% to 300% . . . . keep broke under 1/2 of 1%.*

Clark-Aiken

sustained-accuracy

ROTARY CUTTER

Heavy Cast Frame, heavy tubing girts for rigidity. Insure accuracy, eliminate vibration.

Ball Bearings Throughout for smooth operation and accurate alignment at high speeds.

Length Constantly Maintained. Change-gear rough length adjustment and cone-pulley final adjustment insure accurate sheet length under all conditions.

Self-Sharpening Spiral Knife insures clean, sharp cuts on paper of any thickness.

Ball Bearing Slitters for clean slitting without dust.

Quick, Precision Adjustment of knife and squaring.

Infinite Paper Travel Speed Range — 0 to 700 feet per minute to suit working conditions.

Write for Bulletin 101

Clark-Aiken

sustained-operation

LAYBOY AND DELIVERY

Heavy Rigid Cast Frame, instead of light structural shapes, minimizes vibration and wear, reduces broke.

Ball Bearings Throughout layboy and delivery for smooth operation, accurate alignment at high speeds.

Adjustable Speed Ball-Bearing Joggers. Smooth, free-working. Operated by their own 1/2 h.p. motor. Speed adjustable to any delivery conditions.

Rapid Pile Table Return — 59 seconds.

Fully-Adjustable Tapes. Variable speed take-off tapes eliminate jerking and tearing. Tape grip and tension adjustable for all conditions. Lower tape speeds adjustable for overlap. Adjustable tape guides. Tape travel speed synchronized with cutter operation.

Adjustable Air Pressure insures flat sheet delivery.

Write for Bulletin 201

THE *Clark-Aiken* COMPANY

PIONEERING IN PAPER MILL MACHINERY IMPROVEMENT SINCE 1828

Paper Mill Division

LEE, MASSACHUSETTS

* Based on sustained shake-down tests under actual mill conditions.

FOR QUICK,

Dependable Information

ON HEAVY CHEMICALS...

To the question: "Can you ship us heavy chemicals *now*?" Mathieson will supply a speedy answer. And usually it will be "yes," thanks to our expanded output. If the answer is "not yet," we hope you'll keep trying—only a short time may be needed to supply you. Mathieson has purposely centralized its order, shipping and traffic departments in the main office to give you ready, reliable information. Mathieson Chemical Corporation, 60 East 42nd Street, New York 17, N. Y.

try Mathieson

Caustic Soda... Soda Ash... Bicarbonate of Soda.. Liquid Chlorine Chlorine Dioxide... Ammonia, Anhydrous & Aqua... HTH Products Fused Alkali Products... Dry Ice... Carbonic Gas... Sodium Chlorite Products... Sodium Methylate

Mathieson CHEMICALS

ESTABLISHED 1892 • PLANTS AT NIAGARA FALLS, N. Y., SALTVILLE, VA., LAKE CHARLES, LA.

NEW SERVICE

Takes Guesswork Out of Testing!

ALLIS-CHALMERS LABORATORY AND PILOT PLANT FACILITIES CAN HELP YOU GET BETTER PROCESS EFFICIENCY

HERE IS A SERVICE that can help you now and in the years of industrial change ahead. A-C's Basic Industries Research and Testing Laboratory is dedicated to a better utilization of our basic raw materials. It can help you meet higher production costs with stepped up efficiency . . . can help you get increased production with better methods and equipment.

Through research and testing, skilled Allis-Chalmers technicians evaluate your process . . . may alter your methods to obtain a better, more economical product. Sure, precise testing procedures are based on the accumulated experience of over 100 years of building for industry.

Complete facilities for batch or continuous testing of your raw material samples are contained on five floors in this modern research center. Pilot plant facilities are available to measure accurately the commercial potentials of your proposed metallurgical, wood, chemical, grain or flour milling processes.

These modern laboratory and pilot plant facilities have contributed importantly to mining and processing methods. The scope of Allis-Chalmers engineering experience cannot be duplicated elsewhere. We charge for the use of these testing facilities — and A-C engineering guidance — but on a strictly non-profit basis, as a service to our customers. For more information write direct to Allis-Chalmers, giving a brief description of your processing problems. A 2578

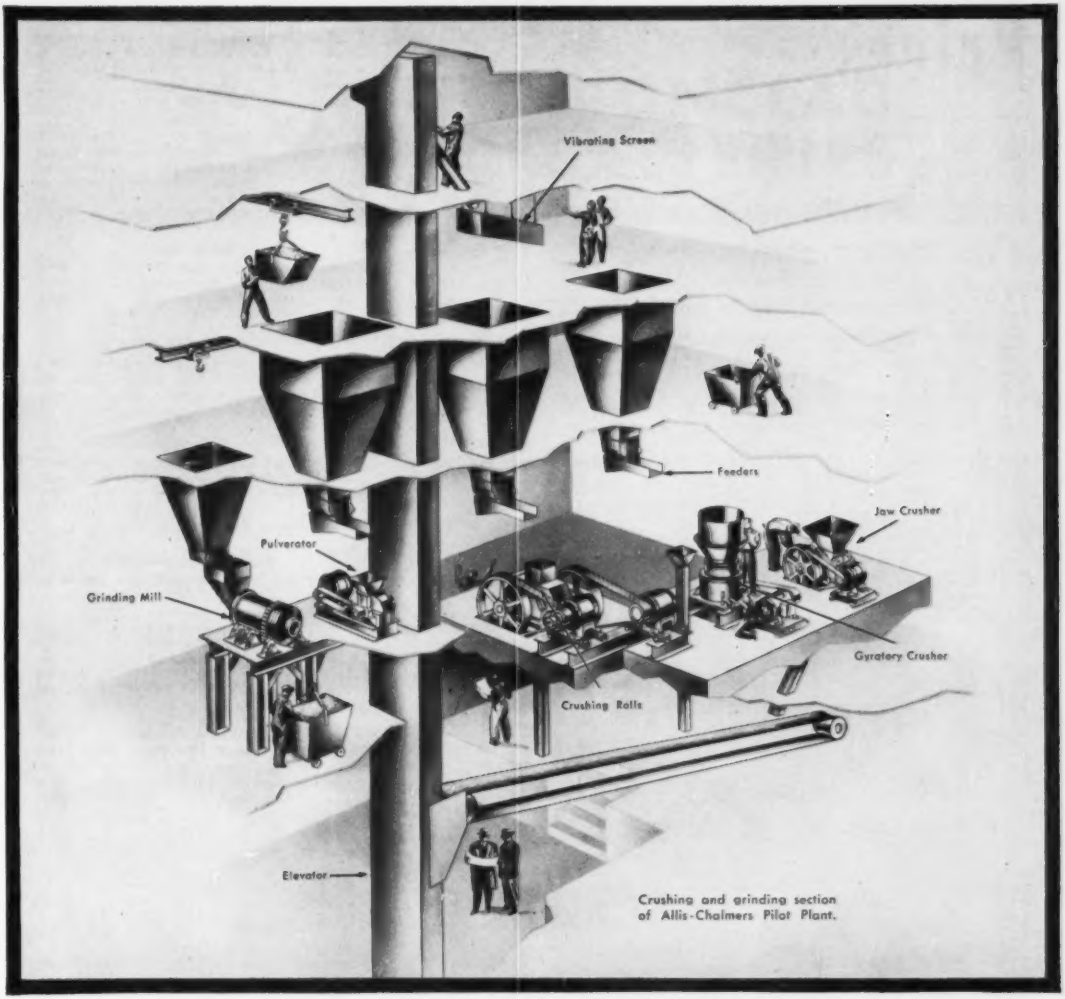
A-C Pilot Plant Facilities

A-C Research and Testing Facilities

ALLIS-CHALMERS, 994A SO. 70 ST.
MILWAUKEE, WIS.

ALLIS-CHALMERS

One of the Big 3 in Electric Power Equipment—Biggest of All in Range of Industrial Products



Crushing and grinding section of Allis-Chalmers Pilot Plant.

Aero-Vibe, Low-Head, Interplane are Allis-Chalmers Trademarks

CRUSHING AND SAMPLING	SCREENING AND WASHING	GRINDING AND CLASSIFICATION	CONCENTRATION	HYDRO-METAL-LURGY	PYRO-METAL-LURGY	MILLING
Jaw Crusher Gyratory Crusher Crushing Rolls Pulverator Samplers Impact Tester Compression Tester Crushability Tester	Aero-Vibe Screens Low-Head Screens Electric Screens Testing Screens Log Washer Screw Washer Blade Mill Jet Washer	Rod Mills Ball Mills Pebble Mills Attrition Mills Air Separator Rake Classifier Spiral Classifier Hydraulic Classifier	Heavy Media Jigs Tables Flotation Infrasizer Magnetic Microscopes Electrostatic	Pachuca Tanks Leach Tanks Thickeners Filters Cyclone Dewaterers Cyanidation Solvent Extraction	Hearth Roaster Pot Furnace Electric Furnace Assay Furnace Arc Furnace Rotary Kilns Preheaters	Flour Rolls Sifters Purifier Dryers Interplane Grinder Hammer Mill Roller Mill Reels

Complete laboratory and pilot scale test facilities for metallurgical research . . .
GRINDING
CRUSHING
ORE CONCENTRATION
PYRO-METALLURGY
PHYSICAL METALLURGY

Complete facilities for wood, chemical, grain and flour milling processing.

Metallographic Lab.
Spectrographic Lab.
Cement Testing Lab.
Oil and Gas Lab.
Electronics Lab.
Chemical Lab.
Ceramics Lab.
Mechanical Testing Lab.
Model shop
Library and facilities for consulting engineers

Prices

CONTINUED FROM PAGE 23

No. 2 Whites, Miscellaneous	2.00/	2.25
Blue Overalls	3.00/	3.25
Thirds and Blues, Repacked	2.00/	2.25
No. 1 Roofing Rags	1.40/	1.50
No. 2 Roofing Rags	1.25/	1.35
No. 3 Jute Bagging	1.15/	1.25
No. 4 Brussels & hrd. Bck'd crpts.	1.25/	1.35
No. 5A Roofing Rags	1.25/	1.35

New Foreign Cotton Cuttings

(Prices to Dealer, F.o.b. Dock, N. Y.)

	Per 100 lbs.
New Dark Cuttings	
New Mixed Cuttings	
Light Silesias	prices
Light Flannelettes	
New White Cuttings	are
New Unbleached Cuttings	
Fancy Shirt Cuttings	nominal
Light Prints	
Bleachable Khaki, No. 1	
Unbl. Khaki, No. 1	

Old Foreign Rags

(Prices to Dealer, F.o.b. Dock, N. Y.)

	Per 100 lbs.
No. 1 White Cottons	
No. 2 White Cottons	
No. 3 White Cottons	
No. 4 White Cottons	prices
Extra Light Prints	
Old Light Prints	
Med. Light Prints	are
Dutch Blue Cottons	
Checks and Blues	
Linsey Garments	nominal
Dark Cottons, European	
Dark Cottons, Egyptian	
Old Shopperies	
New Shopperies	

Bagging

(Prices to Dealers, f.o.b. N. Y.)

	Per 100 lbs.
Foreign Gunny, No. 1	$8.00/ $8.50
Domestic Gunny, No. 1	7.50/ 8.50
Heavy Wool Tares	7.00/ 7.50
No. 1 Scrap Bagging	6.00/ 6.25
Roofing Bagging	.80/ .95
Foreign Manila Rope	5.25/ 5.50
Domestic Manila Rope	5.65/ 5.75
Jute Strings	6.75/ 7.00
No. 1 Sisal Strings	5.00/ 5.25
Mixed Strings	1.30/ 1.50

PHILADELPHIA

Domestic Rags (new)

(F.o.b. Eastern Shipping Point)

White Shirt	.10½/	.11
Light Silesias	.07½/	.08
Black Silesias, soft	.05½/	.06
Unbleached Muslin	.10½/	.11¼
Washable Prints	.06½/	.07
Washable No. 1	.05 /	.05½
Blue Overall	.07½/	.08
Washable Shredding	.02¾/	.03¼
Fancy Percales	.06¾/	.07¼
Unbleachable Khaki	.05½/	.06½
Bleachable Khaki	.06¼/	.06¾
Men's Corduroy	.05¾/	.06
Ladies' Corduroy	.05 /	.05½
Cottonades	.05½/	.06

Domestic Rags (old)

(F.o.b. Eastern Shipping Point)

Mixed White	3.50 /	—
Thirds and Blues Repacked	2.00 /	—
No. 1 Roofing Stock	1.20 /	—
No. 2 Roofing Stock	1.10 /	—

Bagging

(F.o.b. Eastern Shipping Point)

Roofing Bagging	1.35 /	1.40
Old Manila Rope	— /	$.50
Foreign Gunny No. 1	nominal	
Domestic Gunny No. 1	.07¼/	.07¾
Sisal Strings No. 1	.04½/	.05
Sisal Strings No. 2	.03½/	.04
Sisal Jute	.02¾/	.03
No. 1 Scrap	.06½/	.07
No. 2 Scrap	.03 /	.03½

BOSTON

Bagging

(F.o.b. Boston)

	(Per 100 lbs.)
Foreign Gunny	8.50 / 8.75
Domestic Gunny	8.50 / 8.75
Domestic No. 1 Old Rope	6.00 / 6.50
Foreign No. 1 Old Rope	5.75 / 6.00
Mixed Strings	1.35 / —
Transmission Rope—Domestic	3.00 / 3.50
Jute Carpet Threads	— / 4.00
Bleachery Burlap	— / 9.00
Scrap Burlap—	
Foreign	6.75 / 7.00
Domestic	8.25 / 8.50
South America	8.25 / 8.50
Austr. Wool Pouches	8.50 / —
New Zealand Wool Pouches	8.00 / —
New Burlap Cuttings	8.50 / —
Heavy Baling Bagging	8.00 / 8.50
Paper Mill Bagging	— / 7.25
No. 1 Roofing Bagging	— / 1.40

Domestic Rags (New)

(F.o.b. Boston)

	(Per 100 lbs.)
New Light Prints	nominal
Fancy Percales	— / 6.50
White No. 1 Shirt	10.00 /10.75
Light Flannelettes	7.00 / 7.50
Canton Flannels, Bleached	9.00 / 9.25
Underwear Cutters, Bleached	10.00 /10.25
Underwear Cutters, Unbleached	10.00 /10.25
Blue Overalls	— / 6.00
Soft Unbleached	10.00 /10.75
Blue Cheviots	7.00 / 7.25
Fancy Shirt	5.00 / 5.25
Washable	5.00 / 5.25
Khaki Cuttings	5.00 / 5.25
Men's Corduroy	4.50 / —
Khaki Canvas	— / 5.50
B. V. D. Cuttings	10.00 /10.25

Domestic Rags (Old)

(F.o.b. Boston)

	Per 100 lbs.
No. 1 Whites, Repacked	$4.50 /$5.00
No. 1 Whites, Miscellaneous	3.00 / 3.75
Twos and Blues, Repacked	2.25 / 2.50
Old Blue Overalls	3.00 / 3.25
No. 1 Roofing Stock	— / 1.45
No. 2 Roofing Stock	— / 1.35
No. 3 Roofing Stock	— / .80
No. 4 Roofing Stock	— / .80
No. 5, Quality A.	— / 1.20
Old Manila Rope	6.00 / —

Markets

Blanc Fixe

Dry direct process supply good. Demand steady. Currently quoted at $85.00 in bags, car lots at works, 6 cents per pound, l.c.l., deld. By-product supply somewhat restricted. Quoted at $77.50 per ton, car lots, at works, 6 cents per pound, l.c.l., deld.

Bleaching Powder

Supply improves. Demand strong. Prices steady. Prices range from $4.25 to $4.75 per 100 pound drums, l.c.l., works.

Casein

Argentine price weakens further. Buyer interest sags. Expect bigger U. S. supply and much lower prices in 1949 as CCC discontinues purchases of dry milk solids. Current prices on processed acid precipitated casein at 28 to 32 cents per pound for domestic grades and 25 to 25½ cents for imported grades, f.o.b. shipping point.

Caustic Soda

Supplies available for prompt delivery. Flaked and solid improving but still tight. Solid caustic is reported at $3.10/$3.20 per cwt. flaked and ground is quoted at $3.50 per cwt., in 400 pound drums, $4 to $4.45 per cwt. in 100 pound drums —car lots at works; liquid 50 percent in tank cars at $2.50 per cwt.; liquid 73 percent in tank cars at $2.60 per cwt., at works.

China Clay

Supply ample. Demand steady. Domestic filler quoted at $10 to $12.50 per ton, car lots, f.o.b. mines. Coating clay is $15 to $25. Imported clay quotation, short tons, $16 to $35, export warehouse.

Chlorine

Slight improvement in supply reported. Demand easier. Currently quoted at $2.40 per cwt. in single unit tank cars; at $2.70 to $3.90 per cwt. in multi-tank cars, f.o.b., works.

Rosin

Prices drop further; not yet stabilized. Trading dull as consumers proceed cautiously. Export sales good. Gum rosin in drums per 100 pounds net in car lots, f.o.b., Savannah; B, $6.50; G, H, I, K, $7.15; Wood rosin per 100 pounds net, car lots, f.o.b. Savannah; B, $5.00; FF, $6.50.

Rosin Size

Demand continues strong. Supply good. Price eases 15c. Seventy percent gum and pale wood grades, tank cars, $6.15 to $6.25, f.o.b. southern shipping point.

Salt Cake

Supply good. More efficient use has cut industry needs. Prices steady. Domestic salt cake quoted at $27.00, f.o.b. shipping poin', freight allowed to destination.

Soda Ash

Delivery good. Increased production and eased demand from other industries makes supply condition favorable. Current prices, car lots per 100 pounds; in bulk, $1.15; in paper bags, $1.40; and in barrels, $1.90.

Sodium Bicarbonate

Production good. Demand eased by better supply of other alkalis. Reported as $1.95 per cwt. paper bags, carload lots.

Starch, Corn

Demand fair. Prices steady. Supply ample. Pearl grade quoted at $4.92 per 100 pounds; powdered starch at $5.03 per 100 pounds; car lots, f.o.b. Chicago.

Starch, Potato

Paper mill demand brisk. Supply ample. Idaho price stronger. Uncertainty of government support softens undertone of Maine market. High grade quoted at $4.50/$4.75 cwt., f.o.b. Idaho; $3.00/$5.25 f.o.b. Maine; Pearl grade, $4.75/$5.00 cwt. f.o.b. Maine.

Sulphate of Alumina

Supply good. Price steady. The commercial grades are quoted from $1.50 per 100 pounds, in bags, car lots, f.o.b. works. Iron free is $2.50 per 100 pounds in bags, car lots, at works.

Sulphur

Export demand appreciably increased. Supply good. Annual contracts are quoted at $18 per long ton, f.o.b. mines; $19.50, f.o.b. vessels, Gulf ports, Export price f.o.b. Gulf ports is $22.00 per long ton.

Talc

Demand continues in excess of supply. Improvement due. Prices steady. Domestic grades are currently quoted at $23 per ton in paper sacks, f.o.b. mills; Canadian at $35 and up per ton. All prices in car lots.

Tapioca Flour

Market firms. Slight increase noted in demand. High grades in fair supply. Superior high range from $10.25/$11.50 cwt.; high grades $9.25 cwt., on dock Atlantic and Gulf ports; medium grades range from $6.00/$7.50 cwt. on dock, N. Y. Coarse pearl grades, $5.00/$5.50 cwt. on dock N. Y. Medium and low grades in adequate supply.

Titanium Dioxide

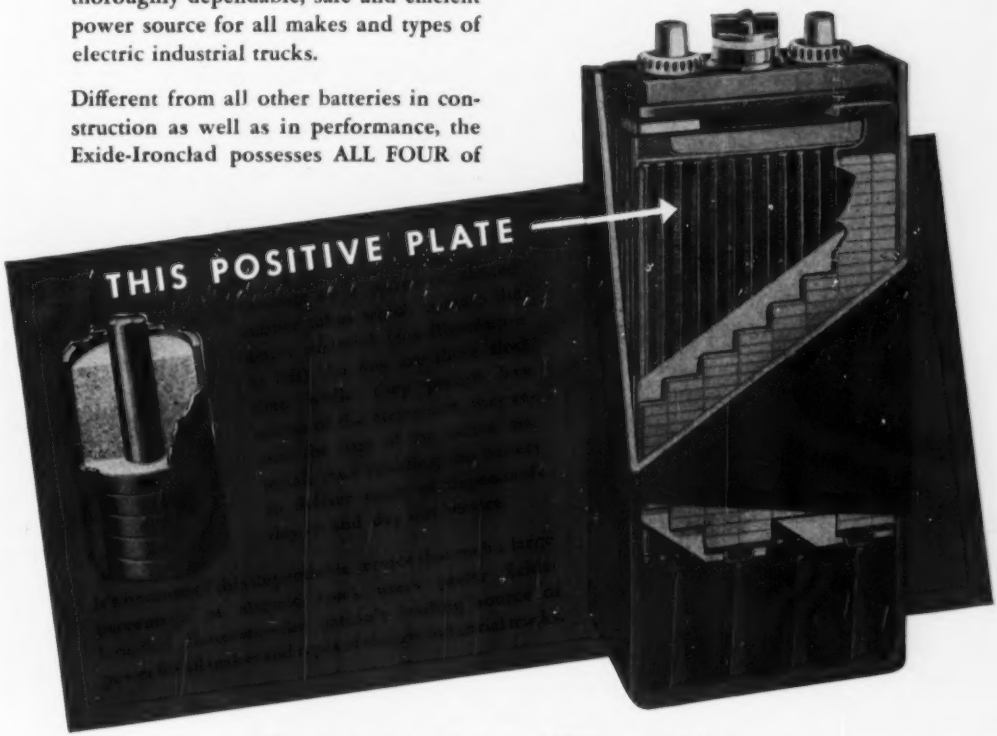
Prices advance 1½ cents, actual freight allowed. Supply of paper grades continues unequal to demand. Shipments on allocation. Improvement in supply delayed to 1951. Anastase 19½c pound carload lots, 20c l.c.l., rutile, 21½c pound carload lots, 22½c l.c.l.; 50-pound bags, f.o.b. plant, actual freight allowed.

USERS EXPRESS PREFERENCE FOR Exide IRONCLAD BATTERIES

Electric industrial truck users have frequently expressed a preference for Exide Ironclad Batteries . . . the batteries that assure peak performance day after day.

Such overwhelming preference for the Exide-Ironclad Battery is based upon user experience. This unique battery has, during the past 35 years, proved itself to be a thoroughly dependable, safe and efficient power source for all makes and types of electric industrial trucks.

Different from all other batteries in construction as well as in performance, the Exide-Ironclad possesses ALL FOUR of the essential characteristics demanded of a battery for electric industrial truck service—(1) high power ability, (2) high efficiency, (3) great ruggedness, and (4) long life. These characteristics are due to the special construction of the Exide-Ironclad Battery, especially its rugged, tubular positive plate.



Write for further particulars and FREE copy of Exide-Ironclad Topics, which covers latest developments in material handling and shows actual case histories.

1888...Dependable Batteries for 61 Years...1949

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 32 • Exide Batteries of Canada, Limited, Toronto

Financial Record

Preferred Stocks	Per Share Calendar Year 1947	Earnings 12 Mos. to Approx. 9/30/48	Indic. Annual Divid. Rate	Feb. 1 Approx. Market Price
Armstrong Cork Co. $3.75 Cum.	$38.64*	$43.53*i	$3.75	99
Armstrong Cork Co. $4.00 Cum. Conv.	38.64*	43.53*i	4.00	109⅛
Celotex Corp. 5% Cum.	24.25c	26.42k	1.00	18¼
Champion Paper & Fibre $4.50 Cum.	65.90f	43.82j	4.50	95
Container Corp. of Amer. 4% Cum.	102.74	98.49	4.00	96½
Crown Zellerbach $4.20 Cum.	56.40f	59.10k	4.20	96¼
Crown Zellerbach $4.00 Cum. Conv. 2nd	211.39f	178.01k	4.00	97½
Dixie Cup Co. $2.50 Cum. Conv. Cla	9.16	9.61	2.50	50¾
Flintkote Co. $4 Cum.	81.91	87.68	4.00	100
Robert Gair Co., Inc. 6% Cum.	18.01	15.97	1.20	16⅞
International Paper Co. $4 Cum.	236.51	242.27	4.00	95
Johns-Manville $3.50 Cum.	128.81	175.15	3.50	109¼
Kimberly Clark Corp. 4½% Cum.	70.03	82.79	4.50	103½
Kimberly Clark Corp. 4% Cum. Conv. 2nd	95.88	114.55	4.00	96⅝
MacAndrews & Forbes 6% Cum.	62.20	59.89	6.00	137
Mead Corp. 4¾% Cum.	81.56	80.43	4.25	78
Mead Corp. 4% Cum. Conv. 2nd	53.34	51.89	2.00	33½
Paraffine Cos. Inc. 4% Cum. Conv.	152.76a	158.96	4.00	103¾
Rayonier Inc. $2 Cum.	13.88	16.09	2.00	34¼
St. Regis Paper Co. 4.40% 1st A	76.93	85.00	4.40	84½
Scott Paper Co. $3.40 Cum.	43.95	54.31	3.40	94½
U. S. Gypsum Co. 7% Cum.	211.34	300.59	7.00	178
United Wallpaper Inc. 4% Cum. Conv.	(d)1.35a	(d)0.79m	2.00	21¼
West Virginia Pulp & Paper 4½% Cum.	75.75c	79.45k	4.50	107
Common Stocks				
APW Products Co.	$1.24	$1.32	$0.25	4⅛
American Writing Paper Corp.	1.61	0.02	0.25	5⅜
Armstrong Cork Co.	6.41	7.17i	3.00	47¼
Celotex Corp.	6.59c	7.21k	2.00	23⅜
Certain-Teed Prods. Corp.	3.75	3.99	1.15	12⅛
Champion Paper & Fibre	5.57f	3.81j	2.00	23
Congoleum Nairn Co.	4.55	5.12i	2.25	30
Container Corp. of America	10.09	9.54	4.50	35⅝
Crown Zellerbach	6.81f	6.70k	2.00	25⅜
Dixie Cup Co.	5.87	6.26	1.00	27¼
Eastern Corp.	5.02	6.51	1.00	13⅛
Flintkote Co.	6.27	6.28	3.00	26½
Robert Gair Co., Inc.	2.83	2.49	0.70	6⅝
Great Northern Paper Co.	4.56	4.55	2.80	38¼
International Paper Co.	15.02	15.39	5.00	48⅜
Johns-Manville Corp.	3.17	4.28	2.00	39
Kimberly-Clark Corp.	4.29	5.16	1.65	20¼
MacAndrews & Forbes Co.	3.68	3.53	2.50	35⅝
Marathon Corp.	3.39c	4.11k	1.40	20⅛
Mead Corp.	7.33	7.11	2.00	16¾
National Container Corp.	4.13	2.86	0.80	8⅛
Paraffine Cos. Inc.	2.40a	2.50	1.20	17⅞
Rayonier, Inc.	7.30	8.88	2.00	29⅜
Ruberoid Co.	10.88	12.90	3.25	53½
St. Regis Paper Co.	2.66	2.86	0.80	8⅛
Scott Paper Co.	3.02	3.79	2.50	48¼
Sutherland Paper Co.	6.87	6.43	2.50	34½
Taggart Corp.	1.29	N.A.	0.60	11⅛
Union Bag & Paper Corp.	7.93	8.13	4.00	29⅞
United Board & Carton	4.95b	2.04h	1.25	6¾
U. S. Gypsum Co.	10.00	14.36	6.00	102⅜
United Wallpaper	(d)0.11a	(d)0.10m	——	3½
West Virginia Pulp & Paper	11.40c	11.33k	4.00	40¼

(a) Year ended 6/30/48
(b) Year ended 5/30/48
(c) Year ended 10/31/47
(d) Deficit
(e) Year ended 10/31/48
(f) Year ended 4/30/48
(g) 12 months to approximately 7/31/48
(h) 12 months to 11/13/48
(i) 12 months to approximately 6/30/48
(j) 5 months to 9/30/48
(k) 12 months to approximately 10/30/48
(m) 12 months to approximately 12/31/48
(n) Last payment 25c, 9/16/47
(*) Pro forma
(N.A.) not available

Dividends Declared

MacLaren Power & Paper Co., has declared a dividend of 50 cents per share for the quarter ending February 28, payable February 28 to shareholders of record February 5.

S. D. Warren Co., on January 24 declared a dividend of 35 cents on its common stock, payable March 1 to holders of record February 11, and $1.12 on its $4.50 cumulative preferred stock payable on March 1 to holders of record February 11.

Scott Paper Co., on January 27 declared a quarterly dividend of 62½ cents on its outstanding common shares, payable March 12 to holders of record, February 25, and 85 cents on its $3.40 cumulative preferred shares, payable May 1 to holders of record April 15.

National Container Corp. on January 24 declared a regular quarterly dividend of 20 cents per share, on its common stock, payable March 10, to stockholders of record February 15.

Employment Fluctuations

WASHINGTON—A declining rate of increased employment in the paper and pulp industries was balanced by a lower quitting rate for the months of November and October, the Bureau of Labor Statistics reports.

Increased number of workers was at the rate of 1.9 per 100 employees in November, compared with the 2.3 per 100 reported for October. However, the quitting rate was down to 1.3 per 100 employees in these industries, from 2 per 100 in October.

The discharge rate remained even with October at .3 per 100 employees, while the lay-offs rose by 1 point in November from the .5 per 100 workers reported for October.

Lay-offs in manufacturing industries generally, increased in November for the second consecutive month, the Bureau reported. Logging operations on the West Coast were affected by adverse weather, it was recalled, with sawmill operations curtailed or shutdown by dock-worker strikes or lack of shipping space.

Profits Before Federal Tax

WASHINGTON — Manufacturers of paper and allied products had a profit ratio of 6.2 percent before Federal taxes in the third quarter 1948, and 3.8 percent after taxes, the Federal Trade Commission reported this week, in its quarterly analysis of corporation earnings.

For the same quarter of 1947, the paper and allied products industries had a ratio of 8.2 percent before taxes and 5.1 after taxes, said the report.

At the same time, the Department of Commerce reported that the paper and printing industries combined, made publicly reported cash dividend payments in December, 1948 of $35,500,000 compared with $30,500,000 in the same month a year earlier.

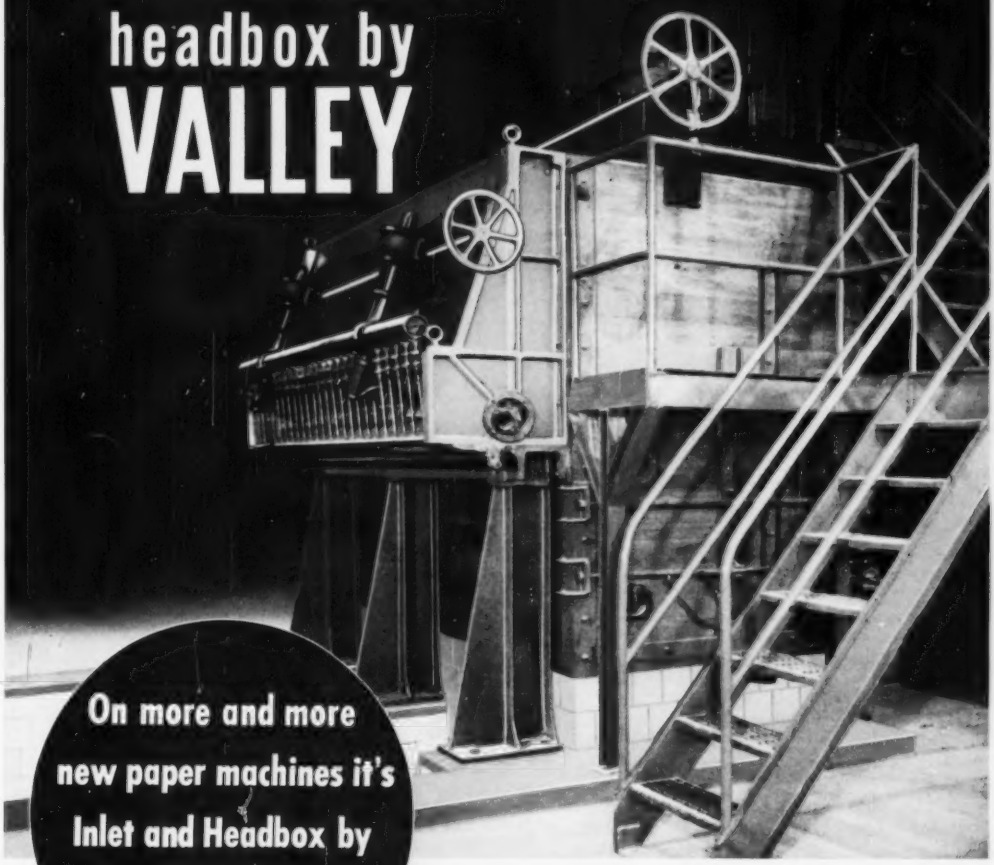
Sinking Fund Move

BOSTON — The Southern Advance Bag & Paper Co., Inc., has notified stockholders that to anticipate, in part, the sinking fund requirements resulting from profits earned in 1948, the company proposes to purchase up to 1,000 shares of its 4½ percent cumulative preferred stock at $102.50 per share, plus accrued dividends to the date of settlement.

THIS IS ON

OXFORD PAPER CO's New No. 12 Machine

. . . it's inlet and headbox by VALLEY



On more and more new paper machines it's Inlet and Headbox by VALLEY

VALLEY IRON WORKS CO.
Appleton, Wisconsin

FORMATION CALIPER LEVEL SHEET INCREASED SPEED HIGHER TEST

Meetings

FEBRUARY 9: Southern Pulpwood Conservation Ass'n., Atlanta Biltmore Hotel, Atlanta, Ga.

FEBRUARY 10: American Society for Testing Materials, Philadelphia District, McAllister's, 1811 Spring Garden Street.

FEBRUARY 14-16: Personnel Conference, American Management Ass'n., Palmer House, Chicago.

FEBRUARY 19-25: Annual Convention, American Paper & Pulp Ass'n., Hotel Waldorf-Astoria, New York. For details, write to E. W. Tinker, Executive Secretary, 122 East Forty-Second Street, New York 17, N. Y.

FEBRUARY 20-25: Technical Ass'n. of the Pulp & Paper Industry, Annual Convention, Hotel Commodore, N. Y. For details, write to R. G. Macdonald, secretary, Technical Ass'n. of the Pulp & Paper Industry, 122 East 42nd street, New York City 17.

FEBRUARY 21-23: National Council for Stream Improvement, Waldorf-Astoria, New York. For details, write to Russell L. Wingett, Executive-Secretary, National Council for Stream Improvement, 271 Madison Avenue, New York 16.

FEBRUARY 22: SAPI Luncheon, Hotel Waldorf-Astoria. For details, write to E. G. Amos, Secretary-Treasurer, Salesmen's Ass'n. of the Paper Industry, 122 East Forty-Second Street, New York 17, N. Y.

FEBRUARY 28-MARCH 4: Spring Meeting and A.S.T.A. Committee Week, American Society for Testing Materials, Edgewater Beach Hotel, Chicago.

MARCH 17-18: Marketing Conference, American Management Ass'n., Hotel Pennsylvania, New York.

MARCH 22: American Society for Testing Materials, Philadelphia District. Franklin Institute.

MARCH 24: Technical Ass'n. of the Pulp & Paper Industry, Delaware Valley Section, Engineer's Club, 1317 Spruce Street, Philadelphia. For details, write to Miss L. V. Hans, secretary-treasurer, 1010 Delaware Avenue, Wilmington, Del.

APRIL 4-6: National Paper Trade Ass'n., Annual Convention, Waldorf-Astoria, N. Y. For details, write to A. H. Chamberlain, executive secretary, National Paper Trade Ass'n., 220 East 42nd Street, N. Y.

APRIL 11-14: National Ass'n. of Corrosion Engineers, Fifth Annual Conference and Exhibition, Netherlands-Plaza Hotel, Cincinnati, Ohio. For details, write to W. Z. Friend, NACE, 67 Wall Street, New York 5, N. Y.

APRIL 14-15: Production Conference, American Management Ass'n., Hotel Pennsylvania, New York.

APRIL 28: Technical Ass'n. of the Pulp & Paper Industry, Delaware Valley Section, Engineer's Club, 1317 Spruce Street, Philadelphia, Pa. For details, write to Miss L. V. Hans, secretary-treasurer, 1010 Delaware Avenue, Wilmington, Del.

MAY 10-12: Packaging Conference, American Management Ass'n., Auditorium, Atlantic City, N. J.

MAY 10-13: Eighteenth National Packaging Exposition, Public Auditorium, Atlantic City, N. J. For details, write to Mr. James O. Rice, Sec., 330 West 42nd St., New York, N. Y.

MAY 19-20: Institute of Paper Chemistry, Thirteenth Annual Executives Conference, Appleton, Wis. For details, write to John G. Strange, secretary.

MAY 26: Technical Ass'n. of the Pulp & Paper Industry, Delaware Valley Section, Engineer's Club, 1317 Spruce Street, Philadelphia, Pa. For details, write to Miss L. V. Hans, secretary-treasurer, 1010 Delaware Avenue, Wilmington, Del.

MAY 26-27: Insurance Conference, American Management Ass'n., Hotel New Yorker, New York.

JUNE 8-9: General Management Conference, American Management Ass'n., New York.

JUNE 15-17: American Pulp & Paper Mill Superintendents Ass'n., Inc., 1949 Convention, Chalfonte Haddon Hall, Atlantic City, N. J. For details, write to George W. Craigie, secretary-treasurer, 220 East Forty-second Street, New York City 17.

JUNE 17-18: Paper and Twine Ass'n., French Lick Springs, Indiana. For details, write to Mr. John L. Richey, Sec.-Treas., Suite 651-653, Hotel Sinton, Cincinnati 2, Ohio.

JUNE 27-JULY 1: Annual Meeting, American Society for Testing Materials, Chalfonte-Haddon Hotel, Atlantic City, N. J.

SEPTEMBER 21-23: Direct Mail Advertising Association, Inc., Annual Conference, Congress Hotel, Chicago. For details, write to Frank Frazier, Direct Mail Advertising Ass'n., Inc., 17 East 42nd Street, New York 17.

OCTOBER 10-14: West Coast Meeting, American Society for Testing Materials. (First national meeting of ASTM on West Coast.) Fairmont Hotel, San Francisco, California.

OCTOBER 24-28: National Safety Council, 1949 National Safety Congress, Chicago. For details, write to Harley B. Goodrich, National Safety Council, 20 North Wacker Drive, Chicago 6, Ill.

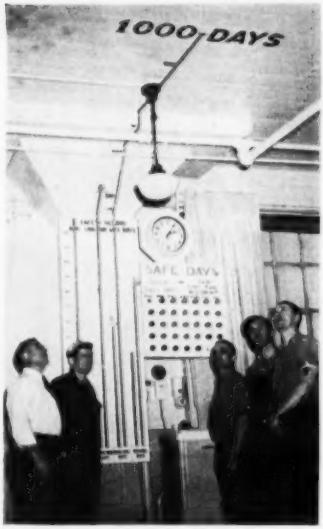
NOVEMBER 1-5: Pacific Chemical Exposition, California Section, American Chemical Society, San Francisco Civic Auditorium, San Francisco, Calif. For details, write to Marcus W. Hinson, exposition manager.

Phila. Paper & Cordage

PHILADELPHIA. — Sheng-Wu-Cheng, a native Chinese student of economics, was the guest speaker at the year's first meeting of the Philadelphia Paper & Cordage Assn., in Gimbel's William Penn Room on January 20th. Mr. Cheng replaces Richardson Dilworth, who sent late regrets for his inability to appear on the program.

Edwin V. Rementer, Hooper Paper & Twine Company, now president of the Association, assumed chairmanship of the meeting. Mr. Rementer announced appointments of chairmen of standing committees as follows: Chas. J. Stokes, Sabin-Robbins Paper Com-Co., good fellowship; Edwin A. Dages, E. A. Dages, entertainment; George Niswander, speakers; Howard Satterthraite, Carrett-Buchanan Co., golf; Harry S. Platt, Denney Tag Co., membership; Edward L. Wallace, Garrett-Buchanan Co., publicity and printing; John R. Howarth, J. R. Howarth Paper Co., librarian.

Frank J. Bushemi, Garrett-Buchanan Co., whose term as president expired December 31, was presented with an onyx desk set in recognition of his work during his incumbency.



MARK 1,000 SAFE DAYS

Nearly three years ago a chart of safety accomplishment was hung on the wall of Kimberly-Clark's Badger-Globe mill at Neenah, Wis. . . . On January 13, after growing off the chart, up the wall, and across the ceiling, the line representing the engineering department effort reached the 1,000-day mark . . . The group observing is the Coordinating Committee for Safety Activity in the 90-man department. Left to right, the committeemen are: George Zitelman, master mechanic; Harold Olson, committee chairman; John Melzer, Carl Landskron, and Frank Sharpless . . . The mill, which is managed by J. C. Wollwage, with H. B. Palmer as resident assistant manager, houses creped wadding manufacturing and finishing operations received first-place recognition nationally for its accident-prevention accomplishments in the contest year ending last June . . . E. E. Glomstead is safety director and Fred D. Hollenbeck, plant engineer directing engineering department functions.

Favors N. Y. Participation

ALBANY, N. Y.—Assemblyman Harold C. Ostertag is reported to be ready to introduce legislation to make New York State a signatory to the New England water pollution control compact designed to abate pollution in waterways common to New York and New England states. New York interstate waterways which would be affected include Lake Champlain, the Hoosick and Housatonic Rivers, and Batten Kill.

control microorganism damage

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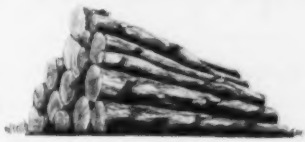

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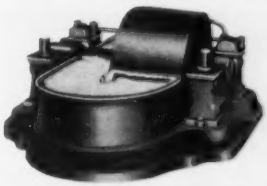

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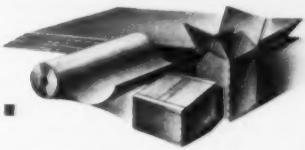


SANTOBRITE

(Monsanto's Sodium Pentachlorophenate, Technical)

Santobrite provides profit-saving protection from losses caused by microbiological activity at many points in paper manufacture.

Low in initial cost, Santobrite requires no special equipment — can be easily and economically applied. It is chemically stable, non-corrosive to metals, non-volatile and comparatively odorless. Furthermore, it is harmless to your employes when properly handled.

For full information on how Santobrite can be used to advantage in *your* mill, send for a copy of Monsanto Technical Bulletin O-5, "Santobrite for Microorganism Control in the Pulp and Paper Industry." Ask any District Sales Office, or write MONSANTO CHEMICAL COMPANY, Desk B, Organic Chemicals Division, 1764 South Second Street, St. Louis 4, Missouri.

DISTRICT SALES OFFICES: New York, Chicago, Philadelphia, Boston, Cleveland, Detroit, Charlotte, Birmingham, Houston, Los Angeles, San Francisco, Seattle, Portland. In Canada: Monsanto (Canada) Limited, Montreal. *Santobrite: Reg. U. S. Pat. Off.*

PROTECTIVE APPLICATIONS

1. **Log Storage — prevents stains caused by rot, fungi**
2. **Slime in Mill System — combats bothersome and damaging microbiological activity**
3. **Stored Pulp Lap — prevents rotting, staining, specking, sliming**
4. **Felts — toxic to microorganisms responsible for rotted machine felts**
5. **Board Stocks — helps prevent spoilage caused by microbiological decomposition**
6. **Size — prevents attacks by molds and bacteria in sizing and coating materials**
7. **Insect Damage — will protect cellulosic materials against termite and other insect attack**
8. **Finished Products — protects boxboard and board against mildewing**

MONSANTO
CHEMICALS — PLASTICS

MONSANTO CHEMICAL COMPANY
Desk B, Organic Chemicals Division
1764 South Second Street, St. Louis 4, Missouri

Please send me a copy of Technical Bulletin O-5 on Santobrite.

Name_____ Title_____

Company_____

Address_____

City_____ State_____

SERVING INDUSTRY . . . WHICH SERVES MANKIND

Equipment & Supplies

Filt-R-Stil

Filt-R-Stil Cartridge Demineralizer for delivering the low-cost chemical equivalent of distilled water without heat and at a maximum rate of 10 gallons per hour has been redesigned. Like previous models, the new unit

consists of three principal parts: a disposable cartridge containing Ionac ion-exchange resins (synthetic chemicals capable of removing dissolved ionized solids without imparting a thing to the water being treated) a bracket or support for the cartridge; and an electrical conductivity indicator (which shows the quality of all treated water and indicates when the cartridge is exhausted and needs replacement). In previous models, the supporting bracket was designed for table-top use. New wall model is said to be lighter, simpler in design and more compact. In addition the conductivity indicator now shows the quality of treated water continuously, where previously it had been necessary to depress a button and check the conductivity at various intervals during usage. Unit requires only 2 watts of electricity. For installation, the unit is fastened to the wall and the inlet tubing attached to cold water faucet. Water flows through the cartridge and emerges essentially mineral free, it is stated. Water delivered by the cartridge unit contains no more than 10 parts of dissolved ionized solids per million parts of water exclusive of silica, the manufacturer guarantees. Rated capacity of cartridges used is 110 grains (as $CaCO_3$); thus one cartridge should produce at least 550 gallons of demineralized water from a two grain per gallon supply, 220 gallons from a five grain per gallon supply, etc. Unit can be operated either continuously or intermittently, delivering demineralized water in a matter of seconds after tap is turned on, it is stated. In use in establishments using, servicing, or distributing batteries; by photo finishers, to make better prints; by steam-iron users, to prevent clogging due to scale build-up; by electro-types, to save silver in sprays; and wherever a low-cost, mineral-free water is desired. For details and prices write to American Cyanamid Co., Ion Exchange Products Dept., 30 Rockefeller Plaza, New York 20, N. Y.

Chain Vise

The Chain Vise is designed to simplify the taking apart of roller chains. Forged steel jaws, so shaped that the pin link has a firm seating on its edges, hold the chain while properly applied blows of an ordinary drift remove the pin. Vise No. 1 is designed to handle single-width roller chains from ½ inch to 1 inch pitch and double-width roller chains; No. 2 to handle single-width chains from 1 inch to 2 inches pitch and double-width chains. For details and prices write to Baldwin-Duckworth Div. of Chain Belt Co., 369 Plainfield street, Springfield 2, Mass.

Papergrab and Twister

The Paper-Grab and Twister is designed to pick up, transport, stack or tier rolls of newsprint, container and coated paper, from a vertical or hori-

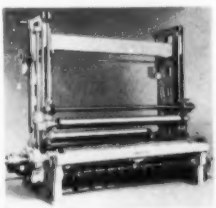
zontal position and without use of pallets. Embodies construction of manufacturer's industrial lift trucks. For details and prices write to MacDonald Truck & Manufacturing Co., 757 Folsom Street, San Francisco 7, Calif.

A-C Magnetic Starters

A-c Magnetic Starters designed for starting and protecting motors up to 50 h.p. are furnished in NEMA sizes from 0 through 3. Contactors can be supplied in NEMA sizes from 00 through 3. Important feature of this new line of full-voltage starters is said to be the one-piece, plastic-encased coil enclosure to protect the windings against dirt, moisture or possible damage during installation. Clamp-type coil terminals are imbedded in enclosure to prevent loosening; self-lubricated vertical slots in enclosure sides permit magnet armature guides to move quietly and smoothly, manufacturer states. The silver contacts are said to be easy to inspect, to interchange or remove without use of special tools. Their large striking surfaces are designed to spread any wear over a broad area, to assure long life; the high initial tip pressure of contact springs to eliminate the possibility of tip welding. Other features include an arc shield of cold-molded asbestos to prevent arc-over between contacts; silicon steel magnet described as exceptionally durable with permanent air gap in a non-wearing surface to insure quick dropout; all steel parts are zinc-plated. Starters are furnished either open or mounted, in general purpose, watertight, dust-tight, or hazardous atmosphere enclosures. For details and prices write to General Electric Co., Schenectady 5, N. Y.

DA Slitter and Winder

Re-design of the Type DA Langston slitter and winder, or rewinder, gives primary consideration to completely enclosed gear drives for the main drive and pressure roll drive, which consist of "nitrided" helical gears run-



ning in oil, announcement states. Use of box-section frames and castings contribute to ruggedness of construction and appearance. Clean-cut, dust-free rolls are said to result from use of a newly-designed frictionally driven front slitter operating in conjunction with a power-driven rear slitter. Various types of drives are available, including direct connected variable speed motors, variable speed clutch pulleys, etc. Machines are built in any width from 82 ins. to 232 ins. and wider, and to rewind diameters to 72 ins. For details and prices write to Samuel M. Langston Co., Camden, N. J.

Beltlube

Beltlube is a belt dressing designed to revitalize leather belts by lubricating the interwoven fibers of the leather. Said to be valuable also for rubber or canvas belting because of its 100 percent Neatsfoot oil base with ingredients added to promote quick penetration, to give better gripping surface and to lengthen the life of the belt. Manufacturer states that Beltlube will not cake or gum on belt surface. Avail-

able in quart cans equipped with cap and spout, packed in cases of 6 and 12; also in one- and five-gallon cans and 50-gallon drums. For details and prices write to Alexander Bros., 406 North Third street, Philadelphia 23, Pa.

Light Duty Cleaner

Light Duty Cleaner is described as a light-weight, well-balanced hand type unit with sufficient power to remove grit, dust and dirt from machines, shelves, overhead pipes, walls, furniture and draperies. Blower nozzle is

furnished as standard equipment. Available attachments make cleaner adaptable for vacuuming, spraying and drying. Cleaner has a ½ h.p. continuous-duty, universal type motor with permanently sealed ball bearings. Weight of unit without 20-foot cord, 8¼ lbs. Performance legend: air velocity at blowing nozzle, 18,000 f.p.m.; suction air volume (1½" hose) 120 c.f.m; waterlift 28 ins. For details and prices, write to Ideal Industries, Inc., Sycamore, Ill.

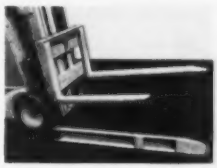
Multiple Drum Carrier

The Multiple Drum Carrier is a special handling attachment for use on fork trucks, designed to pick up, carry and tier two or four 55-gallon drums without use of a pallet. Clamping shoes which grip the drums are actuated by

hydraulic power taken from the fork truck's hydraulic lift mechanism. Weight of drums serves to increase tightness of grip. Manual handling of drums is said to be almost entirely eliminated by use of carrier, and that damage to drums and injuries to workers can be reduced to negligibility. Designed to be easily interchangeable with standard forms, installation requires a few minutes with ordinary tools. For details and prices, write to Clark Equipment Co., Industrial Truck Div., Battle Creek, Mich.

Fork Extensions

Slip-on Fork Extensions are designed to adapt fork trucks to handle loads of different lengths. Instead of changing forks when a longer load is to be handled, a pair of slip-ons can be placed over the forks already



mounted on the truck. Attachment is accomplished by locking securely at heel of fork with stud and latch. Constructed of welded steel, extensions are available with various style ends; standard, for picking up pallets, tapered, for handling rolls of paper; chiseled, for handling bagged or other loose materials; and many others. For details and prices write to Lewis-Shepard Products, Inc., 271 Walnut Street, Watertown 72, Mass.

Westvaco Changes

CHARLESTON, S. C.—The West Virginia Pulp & Paper Co. has made a number of changes in the management organization at its local plant.

Theodore A. Cook, resident manager, said, "The company has for some time been interested in the possibility of extending its operations at Charleston to take better advantage of the wood supply and other opportunities afforded by location in this area. One possibility lies in the manufacture of 'dissolving' pulp out of hardwoods with which we and others have been experimenting extensively and for which we believe there is a growing market, although in some danger of over production. Given the cooperation of the community and the various public authorities concerned, we hope to be able to work out a project which will bring a good deal of new business to the plant and to Charleston. There remain, however, a number of serious technical and economic problems to explore before we can reach a firm decision.

"The changes announced this morning are designed to release J. D. Cowan, assistant manager in charge of production, for special assignment in connection with the study of such problems."

As a result, it was added, L. F. Thompson, assistant manager in charge of administration will for the time being become general assistant to Mr. Cook. C. A. Shoudy, formerly paper division superintendent, will assume a newly created position of general superintendent. J. A. Hoover, formerly machine supervisor, will assume the position of paper division superintendent and E. M. Garrett will assume the position of machine supervisor. G. W. Swallow, formerly in the engineering design division, has been promoted to the position of paper division engineer. A new position of chemical superintendent has been created which will be under the direction of C. B. Rhoads. In addition to his past duties of having charge of recovery, lime burning and liquor making, by-products at this plant will be under his supervision.

T. A. Willingham, pulp fibre division superintendent, also has been given additional duties. The wood yard and chipper divisions will be placed under his supervision.

J. D. Wieters, formerly assistant supervisor of the by-products division, has been promoted to additional assistant to Mr. Willingham, assuming most of the duties formerly performed by J. T. Walker who will be assigned to special duties in the manufacture of pulp. Arnold Werle has been promoted to the position vacated by Mr. Wieters.

Canadian Carloadings

OTTAWA—Car loadings on the Canadian railways of woodpulp and paper declined to a cumulative total of 8,740 cars from the first week of 1949 until week ended Jan. 15 compared with 8,786 cars in the similar period of last year ending week of Jan. 17, according to the latest report of the Canadian Government. The Eastern Division accounted for 7,583 cars this year as against 7,645 cars a year ago and the Western Division for 1,157 cars compared with 1,141 cars last year in the same period.

FOB Pricing Hearings

WASHINGTON — Hearings on the Johnson bill (S. 236), to clarify and formulate a consistent and coordinated national policy with respect to transportation costs in interstate commerce, etc., began on January 24. Plans are being made for the presentation of the pulp and paper industry's views, the American Paper & Pulp Ass'n. stated on January 25.

Stir Quoddy Project

WASHINGTON.—Another maneuvet toward revival of the Quoddy Tidal project got underway on January 24 when the matter was placed before the International Joint Boundary Commission by Maine Congressmen and Governor Frederick Payne.

25th Anniversary

MINNEAPOLIS—The Minnesota Paper & Cordage Co., is currently celebrating its 25th Anniversary.

Literature

Economic Accounting, Inc., 308 Citizens Bldg., Decatur, Ill. Booklet, "Price Problems, An Accounting Report" by Franzy Eakin, price $1.00. Accounting techniques and principles are used to assemble and examine the nation's economic accounts to determine the nature of price problems and as a basis for recommendations to establish a dynamic and balanced economy. The Report makes seven recommendations for immediate action to ease the present price situation.

American Car & Foundry Co., 30 Church street, New York 8, N. Y. Catalog, "A.C.F. Plug Valves". Covers full line of Lubricated Plug Valves: semi-steel, multiport, round port opening, V-port and Diamond port, Steam-Jacketed Base Plate, Bronze, Aluminum; also accessories.

Allegheny Steel Band Co., P.O. Box 716, Pittsburgh, Pa. Bulletin, "Steelband". Features the benefits of Allegheny Steelband Tensioners and Sealers, Bandwagon, Jr., Seals and Strapping.

Leeds & Northrup Co., 4907 Stenton avenue, Philadelphia 44, Pa. Catalog, "Micromax Model S Indicating Recorders and Controllers," gives complete specifications of recorders and controllers for measuring a wide variety of process variables in convenient, tabular form. Suggested chart numbers also are listed for the most commonly used ranges, together with other Model S accessories and supplies.

National Carbon Co., Inc., Room 1328, 30 East 42nd street, New York 17, N. Y. Catalog Section B-2106, "Standardization of Carbon, Graphite and Metal-Graphite Brushes for Motors and Generators." Outlines a simple method of saving time and money for users of motors and generators by illustrating how standardization can be accomplished.

National Research Council of the National Academy of Science, (Prevention of Deterioration Center, Room 204), 2101 Constitution avenue, Washington, D. C. Abstracts, "Prevention of Deterioration," yearly subscription basis $37.50, includes two binders and index guides. Abstracts are classified under headings: Biological Agents; Electrical and Electronic Equipment; Fungicides and Other Toxic Compounds; Lacquers, Paints and Varnishes; Leather; Lubricants; Metals; Miscellaneous; Optical Instruments and Photographic Equipment; Packaging and Storage; Plastics, Resins, Rubbers and Waxes; Textiles and Cordage; Wood and Paper. Cross references included in each issue; author and subject index compiled at the conclusion of each volume. Material is obtained from journal articles, patents and unpublished reports from government, university, and industrial research groups. Approximately 2000 pages published a year, in two volumes of six issues each. An "Advance List," monthly bibliography of all reports received in this field by the Prevention of Deterioration Center also available for an additional $10.00 per year.

Northern Equipment Co., Erie, Pa. Bulletin No. 487, Copes Performance Report, "Boiler Water Level Control, Blackhawk Generating Station, Wisconsin Power & Light Co.

H. K. Porter Co., Inc., 1932 Oliver building, Pittsburgh 22, Pa. Catalog, "Porter Lubricated Plug Valves, for accurate positive control of fluid flow." Provided with illustrations, dimensional drawings, tables and descriptive matter of complete line of valves. Features cross-sectional view of the valve which, with accompanying explanation, gives a description of the valve. Tables contain all pertinent data such as dimensions and prices, size of lubricant stick, size of adaptor for pressure-gun lubrication, size of wrench and locking device and weight of valve.

MORGAN H. THOMAS

—president of the Garrett-Buchanan Co., Philadelphia, was honored on the 50th anniversary of his association with the company by 200 of its employes and guests at a testimonial dinner at Hotel Barclay on January 14 . . . Mill and converter executives among the guests included: Thomas B. McCabe, chairman of the board of governors of the Federal Reserve System of the U.S., now on leave-of-absence as president of the Scott Paper Co.; Alexander Colville, III, president, E. J. Spangler Co.; Charles A. Labor, Philadelphia district manager, Champion Paper & Fibre Co.; and Fred W. Hastings, Philadelphia district manager, American Writing Paper Co.

Puget Sound Pulp & Timber Co., Bellingham, Wash. (Address Challiss Gore, Box 87, Orinda, Calif.) Booklet, "Making Puget Pulp." Describes in non-technical language and by a series of 60-odd photographs the process of pulp-making. Commences with logging operations and continues through manufacturing operations and into the plants where pulp mill waste is converted into by-products. An outline of the history of pulp and paper-making prefaces the description of modern pulp manufacture.

Sinclair Research and Development Laboratories, Harvey, Ill. Brochure, "A Symbol of Progress." Marks the opening of the new Sinclair Research and Development Laboratories.

J. E. Rhoads & Sons, 35 North 6th street, Philadelphia 6, Pa. Booklet, "How to Select, Maintain, Install Modern Leather Belting." Designed to show belting users how to get efficient power-transmitting performance with minimum maintenance for maximum service life. Compiled and approved by the American Leather Belting Association. Sections include: How to Select, How to Install, How to Maintain, and Transmission-Belt Troubleshooter Table.

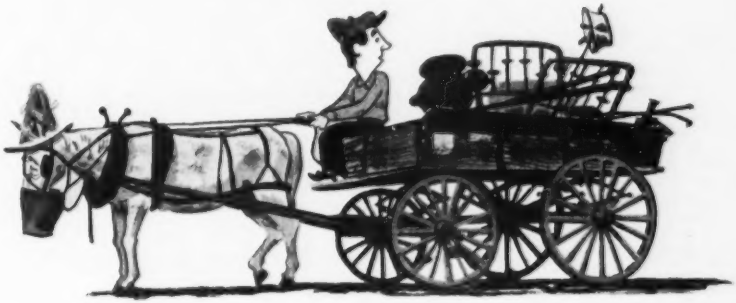
Ross Heater & Mfg. Co., Inc., 1407-1411 West avenue, Buffalo 13, N. Y. Bulletin, "Ross BCF Exchangers." Presents complete line through illustrations and pertinent data. Cut-away views illustrating construction, line drawings showing sizes, dimensions and weights accompany brief text on various applications of this all-nonferrous unit.

Southern Pulpwood Conservation Assn., 1506 First National Bank building, Atlanta 3, Ga. Booklet, "How to Make the Most Money From Your Trees." Revises the information formerly contained in folder entitled, "How to Make the Most Money From Your Timber."

Sprout, Waldron & Co., Muncy, Pa. Bulletin P-848, "Cast Iron Pulleys For Industry Since 1866." Describes full line of Blue Face Pulleys with new list prices. Makeup designed to facilitate quick and accurate reference. Devotes two pages to Belt-Saver Pulley, back cover to varied and typical installations of pulleys on the job.

Worthington Pump & Machinery Corp., Harrison, N. J. Bulletin, W-305-B1A, "Centrifugal Pumps, Types CN-CNE." Provides specifications, installation instructions, rating charts and dimensions of centrifugal pumps for Belt, Multi-V-Drive, and Motor Drive. Bulletin W-350-B2E, "Antaciron Centrifugal Pumps, Type CU, For Handling Acids and Acid Slurries." Describes by text and schematic diagram physical properties and salient features. Provides performance curves, discusses applications to various acids, and presents dimensions for each type of pump.

Nobody throws away Stainless Steel



Stainless steel *lasts*. Allegheny Metal stays bright and strong —gives lifetime service—under conditions of corrosion, heat and wear that send lesser metals to the junk-pile in a few years, or perhaps only months. Wherever a superior metal will give you advantage, you'll find it cheapest in the long run to use Allegheny Metal, the time-tested stainless steel.

Complete technical and fabricating data—engineering help, too—yours for the asking.

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The Nation's Leading Producer of Stainless Steel in All Forms

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Allegheny Metal is stocked by all Jos. T. Ryerson & Son, Inc., Warehouses

Report on World Trends in Pulp and Paper

NEW YORK—In a policy "Report on World Trends in Pulp and Paper," the seventh in a series of UN world commodity surveys by the editors of *United Nations World*, that publication's December issue said:

"The ultimate contest is the war of ideas. Even at this moment behind the peace-feelers being put out by East and West, is the big push to capture the moral allegiances of mankind, as well as diplomatic and strategic positions.

"As this struggle unfolds, it becomes daily more evident that the Marshall Plan cannot obtain its objectives with dollars only, any more than the Molotov Plan can gain its goals with rubles alone. To make democracy a fact in Western Europe, to make communism a fact in Eastern Europe, requires a moulding of minds at a rate and on a scale unprecedented in human history.

"Central to this supreme debate, this war of words and ideas, is paper—paper for books, for magazines, for the daily press, for propaganda leaflets. During the Italian elections, for example, among funds raised by US trade unionists supporting the De Gasperi coalition of Christian Democrats with Saragat's right-wing Socialists and Pacciardi's Republicans $27,500 was earmarked for a single crucial purpose: the purchase of paper that would enable the De Gasperi alignment to print its platform and pledges and pleas, and so counteract Communist proselytizing.

"Hence the query put often by Marshall Plan critics to ECA Administrator Hoffman and the US Congress: 'Will more paper for books and newspapers and other periodicals make democracy a working reality in Western Europe?' That question has been best answered by the *London Economist:* 'Certainly not, but it will not work without them.'

"Nor could modern industry, or government, or education, or science or art or anything else work without paper. It is the only commodity for which there is no substitute. During World War II, paper was used in place of glass, silk, canvas, cork, felt, shellac, mica, plaster, straw, slate, leather, and tin-foil.

"The reverse, however, does not hold. Although paper has sufficed as an emergency or long-term substitute for more than 250 articles, none of these can pinch-hit for paper. Potatoes can be eaten instead of bread, coal burned instead of oil, plastics used instead of steel but nothing else can do the job, can stand-in for paper which besides being the carrier and conduit for the printed word, is money and grocery bags and lampshades, telegrams and stock certificates. It is letters and postage stamps. It is factory blueprints and electrical insulation. It is business records, government forms, packaging for foods and drugs, and containers for shipping them. It is drinking cups, navigation charts, towels and directories.

"Despite the pervasive and omnipresent character of paper the essentials of its manufacture remain the same as they were in 105 AD when the Chinese government official, Tsai L'un, first invented paper as distinct from papyrus made of the reedy plant of the Nile delta, and parchment made of the skins of sheep and goats.

"To make paper, cellulose from almost any source—rags of cotton, wool, or silk or pulpwood from trees—is broken up by pounding into individual fibers. These are then suspended in water, a thin gruel which is drained through a fine-mesh screen until the fibers are transformed into a thin, moist, felted mash from which the water is removed by means of evaporation and/or heat and pressure.

"But while the fundamental process has remained virtually unaltered down the ages, the changes and refinements beyond the rudimentary stage have been prodigious, even awesome. Today's paper-making machinery often reflects an inventive ingenuity, an engineering exactitude, and a mechanical accuracy unsurpassed by any other contrivance of equal size. A machine turning out newsprint for example, may be a hundred yards long, produce an unbroken web of paper 24 feet wide, at the rate of 2000 feet a minute, at a tolerance 'set' of one-thousandths of an inch.

"One mill may make only newsprint, another magazine or 'glossy' stock, a third stationery, a fourth the ultra-specialized tough resilient paper used for currency.

"The US pulp and paper production ranks sixth among all industries in size. It employs 173,000 workers in 37 states. With a capital investment of $3 billion it annually turns out a product valued at almost exactly the same amount. The major reason is that in the last half century US consumption of paper has risen from 57 pounds per capita in 1899 to 355 pounds in 1948.

"Behind that increase, stimulated during the last two and one-half years by foreign shortages and demand for exports, has been the development of an economic system which in terms of technology and merchandising is the most advanced in the world, even if in terms of literacy it ranks only eighth.

"But a large part of the phenomenal growth of the paper industry, in the US and to a lesser extent abroad, cannot be explained by general industrial progress. Paper as a commodity depends for its success upon the low-price service which it renders—as Dr. L. T. Stevenson, able US paper economist has pointed out. Hence the search for low-cost materials is constant, in-

GUMMED INDUSTRIES ASS'N EXHIBIT

The importance of strong, safe, dependable closures was the theme of the exhibit of the Gummed Industries Ass'n., at the recent Materials Handling Exposition in Philadelphia . . . The booth focused attention on the strong "weld" made possible with properly moistened tape, the ease of application when following the "Eight Steps to Perfect Closure", and the "padlock" which printed sealing tape offers the shipper . . . Thousands of copies of the new official GIA instruction manual, "What Every Shipper Should Know", were distributed.

tense, even feverish.

"In the first place, to meet boom demand and maintain their lush profits, paper companies have to reach out for sources hitherto untapped. In the second place, paper is exquisitely sensitive to the rise and decline of purchasing power. In 1921, for example, when the boom following upon World War I collapsed, paper sales dipped 34 percent in nine months. After the stock market crash of nearly two decades ago, nine major paper corporations which had an aggregate net income of $24.1 million in 1929 showed a joint loss of $12 million in 1932. In the 1938 'recession' 10 leading paper concerns that together had made $30 million in 1937, were down to $11 million in 1938.

"Consequently, over the last 20 years, the US paper industry has turned to research, very intensive research in laboratory and afield, not only to find new sources of raw material but also to develop new techniques in manufacture and marketing, as well as to foster new uses for paper as a hedge against future decline in the business index.

"From such research organizations as the Institute of Paper Chemistry in Appleton, Wis., the College of Forestry's Paper Division at Syracuse University, the Department of Agriculture's Pulp Laboratory in Peoria, Ill., together with 25 other similar institutions and the research departments of private concerns, constantly come new developments—

"To reclaim wastepaper more effectively.

"To extract gums and resins from pulp more quickly.

"To control stream pollution.

"To make the surplus of aspen trees in the Lake States as good a source of pulp as the famous but dwindling stands of spruce.

"To survey new uses for paper tissues, packaging, building.

"To make paper from cotton, flax, sugar cane, straw and other sources of cellulose, the indispensable ingredient for paper making.

"To discover new tree species that under chemical treatment can yield the proper fibers.

"To assist in the reforestation of vast areas.

"The usefulness of research as a tool for the paper industry has been most spectacularly illustrated by the fact that during World War I, the limited supply of Northern spruce was seen as a bar to further expansion of the US paper industry. As a result of such laboratory vigils and investigations, the Southern region (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia) was by 1947 producing 49 percent of US wood pulp, on an investment of $1,222,000,000. From 1928 to the present the paper making capacity installed in the Southern region went up from a daily 4.1 tons to 18.3 tons, while hourly earnings of paper making and pulp lumbering labor have risen more than 200 percent. Paper from southern pine represents the bulk of the US industry's expansion during the past two decades. But since then research discoveries in 'pulping' the famous southern pine, together with other varieties of trees, has enabled US paper production to grow from 5 million tons in 1914 to 22 million tons in 1948. In contrast, the UK produces 7½ million tons, the USSR 1 million tons and Sweden slightly more than ½ million tons.

"This disparity is only in part a result of war devastation and economic dislocations. To be sure, Europe as a whole which in 1939 turned out some 13 million tons of paper as against 18 million in the US and Canada has been unable to restore production to even half that amount. Germany, for example, which before the war was the Continent's major producer and exporter of paper of all types and grades, has recovered only 23 percent of its pre-war level.

"But war ravages cannot entirely explain the fact that the USSR, with the greatest wood pulp resources in the world (see map on page 52), produces only 1/22 as much paper as does the US. Despite the tremendous educational literacy drives, the growth of a bureaucracy that uses more paper in a week than did the czarist government in a year, despite the vast number of newspapers, journals, books, the USSR has not achieved in paper production advances comparable to those on other industrial fronts.

"This has been a conscious choice. Timber in the form of logs has been a major cash-on-delivery export, and without sufficient motor-saws and with only sleighs for haulage in many areas, Commissars for Forest Products and Foreign Trade believed that only a limited amount of timber could be or should be diverted to wood pulp.

"In Sweden, traditional source of high-quality paper, prospects for a 10 percent rise in 1948 production are not being fulfilled. Extraordinarily heavy snows, a shortage of lumbermen for tree felling, and resentment of farmers against the low prices offered for their pulpwood by the Sweden Timber Owners Association (a state sponsored cartel) combined to reduce production by an estimated 3½ per cent under original targets. Moreover, Swedish exports which were up some 170 thousand tons during the first of 1948 may soon decline as Brazil, Argentina and other nations resist what they believe to be unduly high prices and the need to deal with Sweden through a hard currency medium.

"Meantime, in other parts of the world:

"*Java*—Unsettled political conditions have reduced the supply of newsprint to 4 percent of that available in 1939, thus cutting all printed matter by 96 percent, arousing fierce protests.

"*Burma* — The government claims that the manufacture of paper from bamboo has become a practical and potentially profitable reality. Some 12,000 square miles of virgin bamboo stands are both accessible and economically exploitable.

"*Czechoslovakia*—The deportation of 3 million Sudeten Germans mainly between June, 1945, and November, 1946, resulted in drastic labor shortages in the paper industry since most of the paper mills and the forests of Bohemia are located in the Sudeten area.

"*China*—The war has halted the efforts of the Chiang Kai-shek government to establish a modern 'pilot' pulp mill at Mamoi, in the Province of Fukien, famous for centuries for its fir and pine. The proposed plant which would have occupied 1000 acres and cost $20 million was to have been the first of several to lift the annual consumption of paper from the present average of one-tenth of a pound per person.

"The potential rise in living standards and literacy in tropical, hardwood areas, together with the certainty of an increase in paper demand in the temperate zones, indicate early exploitation of new methods of using hard woods (other than bamboo) and such annuals as cornstalks, and other woody-fibered plants.

"As industrialization programs go forward in underdeveloped areas in Asia and Latin America and Africa; as Europe strains to restore and then to exceed its pre-war living standards, the global demand for paper—in all its prismatic forms—will mount steadily, insistently, inevitably. For paper remains not only the indispensable staple of present-day civilization but also its symbol and sounding board."

345,336 No-Accident Hours

BROOKLYN, N. Y. — Accident-free operation for 345,336 man hours at the local printing ink plant of the J. M. Huber Corp., earned a Certificate of Merit award for the company issued by the Liberty Mutual Insurance Co. The record covers a period of approximately 20 months beginning February 13, 1947 and ending October 6, 1948 in which no lost-time accidents occurred.

Building Ontario's Economy

OTTAWA—Premier Kennedy, in an address to the Canadian Club, said that Ontario's northland turned out 1,500,000 tons of pulp and paper last year. He added that while this province's northern railway was built to open up the country rather than to earn an immediate profit, it received $1,600,000 in freight rates from the pulp and paper industry alone, last year.

New Pittsburgh Corning H.Q

PITTSBURGH — The home offices of the Pittsburgh Corning Corp. are being transferred from the Pittsburgh Plate Glass building to 307 Fourth avenue.

Diver Recovering Sunken Logs Off of Harbor Bottom

PORT ANGELES, Wash.—Thirty-year-old Robert Forrest, who has yarded a million and one-half feet of hemlock logs off the harbor bottom for the Crown Zellerbach Corp., pulp and paper mill here. He does his logging in a diving suit down among the devilfish in water up to 120 feet deep.

"How those octopi resent me," he commented, recalling how a big one tackled him last summer. "I barely had time to send a few frantic signals surface-ward before he had me wrapped up like a Christmas package." On the surface Mr. Forrest's three-man, all veteran crew hauled him in, devilfish and all. The octopus measured 18 feet across and weighed 150 pounds. The Port Angeles diver thanks his metal helmet and breastplate for saving him.

A veteran salvage diver of World War II, Mr. Forrest conceived the log salvage idea, outlined the plan to Crown Zellerbach officials and came up with a contract.

Water-soaked hemlock logs that sink out of sight when rafts are broken up in the paper-mill's booming yards long had been a problem. Mr. Forrest and his partner Philip Tobin, rounded up three "Sea Mules," a 140 horsepower gas engine, tanks, compressor, diving suits and equipment, all war surplus. With this gear they soon had a self-contained mobile diving and hoisting barge. For his crew Mr. Forrest picked three veterans of Coast Guard and Navy service.

Mr. Forrest does most of the firm's sub-surface work. He makes one descent a day. On the bottom he attaches choker lines to six or seven submerged logs, enough to keep the surface crew busy for an entire shift. An average size salvage log measures 38 feet long and is from three to four feet in diameter at the butt end.

Underwater, Mr. Forrest performs double duties as chokerman and log grader. Grading is most important. Hemlock that has been too long on the bottom is attacked by teredo borers and becomes worthless for pulp.

Chokers used for shackling submerged logs hang suspended in the water with their surface ends attached to wooden blocks that serve as buoys. When Mr. Forrest picks a log for salvage he grabs the submerged end of the nearest choker, fastens it around the log and secures the clevis hook. When he has chokered a sufficient number of logs for salvage, he signals the barge crew to hoist him surface-ward.

The Port Angeles diver calls the harbor bottom beneath the booming grounds an immense underwater cold deck of logs. Some lie flat on the bottom, others stand on end and some, not yet completely water-soaked, hang at an angle in the murky depths.

Mr. Forrest estimates that millions of feet of good logs still rest on the bottom. Many accumulated during war years when salvage operations were impossible. Already they have raised 2,300 logs, enough to keep the mill running more than a week.

Doubts Topping '48 Output

ROTHSCHILD, Wis.—Commenting on the current outlook, D. C. Everest, president and general manager of the Marathon Corp., says:

"There has been much talk about new capacity coming into production, but we must remember that normal consumption has increased an average of about five per cent annually and that every old property capable of turning a wheel has been pressed into service; also, that these properties have not had the benefit of adequate repair and maintenance.

"With present day costs of doing a repair and replacement job on such properties, it becomes a question, even with the new capacity, whether the industry is capable of producing a record high level of 1948."

Planned Forestry

VANCOUVER, B. C.—One of the first firms to realize the need for planning experimental forest management work in British Columbia was the Powell River Co. The firm is embarked on a program of forest research designed to anticipate as closely as possible the conditions of forest management and operation as they will exist in the future.

According to Geoff Marples of the company's forestry department, the first step in this program has been the establishment of a 450-acre experimental and demonstration forest area, on company owned property between Powell River townsite and the villages of Cranberry and Westview. The main forest type is composed of 50-year-old Douglas fir, which originated after logging in the 1890's.

Situated as it is in the very heart of a large wood-using community, this area has long been a source of firewood, shingle bolts and other wood products to the local population.

Printing Exhibition

NEW YORK—Winning entries of the Commercial Printing Exposition, 1948 were shown at the American Institute of Graphic Arts on January 24. From the 2,000 entries examined, 86 were selected for one of three groups: Group I: excellence of design, excellence of printing, 77 entries; Group II: excellence of design only, six entries; Group III; excellence of printing only, 13 entries. Two entries of the West Virginia Pulp & Paper Co., met Group I requirements, and one of each of International Paper Co., Container Corp. of America, and U. S. Gypsum reached Group III.

Giving Inventions and Patents Course

NEW YORK—A course on Inventions and Patents, Their Management and Exploitation, is being offered by New York University, through its adult education school, the Division of General Education.

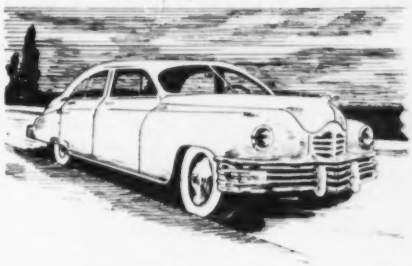
The course is to be given by Dr. Frank Makara, registered patent attorney and engineer, who is a contributor to *Paper Trade Journal*. The course is to be offered on Thursday evenings from 8.10 to 9.55 p. m. and will run from February 3 through May 19. The course fee is $30.

The course includes the following lectures:

February 3. Secret Products and Processes. Contrast of Trade Secret with Patented Invention. *February 10.* The Business Viewpoint of Patents: A patent as an exclusionary grant in contrast to a personal property grant; how much is a patent worth; patent promoters and sales agents. *February 17.* The Business Viewpoint of Patents (continued): Finding a buyer for the application and issued patent; what the patent sales includes. *February 24.* The Business Viewpoint of Patents (continued): Royalty Contracts—computing royalties, price fixing, licenses, foreign rights, etc. *March 3.* Employer-Employee Rights and Relationship to Patents: Personnel hired to invent; shop-rights in inventories of personnel not hired to invent; rights of government employes; government rights in all patents.

March 10. The United States Patent Office: History and function. *March 17.* Prosecution of a Patent: Selection of an attorney; effect of publication and use before filing; statutory classes; inventive acts; reduction to practice. *March 24.* Prosecution of a Patent (continued): Utility; novelty; etc. *March 31.* Prosecution of a Patent (continued): Combinations versus aggregations; anticipation versus domination; claim writing.

April 7. Effect of Prior Art Searches on the Way a Patent Is Written and Described. *April 21.* Disclaimers. Reissues. Personal Interviews. Allowance and Repeal of Patents. *April 28.* Interferences: What they are; what they decide; questions of priority; setting up courts; bringing in parties; declaration. *May 5.* Interferences (continued): Motion practice; appeals, Board of Interference Examiners. *May 12.* Appeals: Board of Appeals; Court of Customs and Patent Appeals; District Courts. *May 19.* Foreign Patents: Canadian practice; practice in England and France. Other Considerations: Design patents, trade-marks, etc.



1. Is this an au-to-mo-bile?
Yes, this is an au-to-mo-bile.
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American Industry has gone a long way since McGuffey compiled his First Reader in 1836. But Powell Valves have matched every step in its progress.

Literally, Powell Valves help to make everything that goes into the modern automobile. Because, whether it be motor, transmission, chassis, body, plastics, finishes, tires, anti-freeze, battery, gasoline or any other processed item, there are Powell Valves exactly suited to control the flow of all media used in their production.

This automobile merely illustrates the completeness of the Powell Line. The important point is that, no matter what *your* product may be, there are Powell Valves especially adapted for each and every one of your flow control services.

Fig. 1793—Large 125-pound Iron Body Bronze Mounted Gate Valve with outside screw rising stem, bolted flanged yoke and tapered solid wedge. Also available in All Iron for process lines.

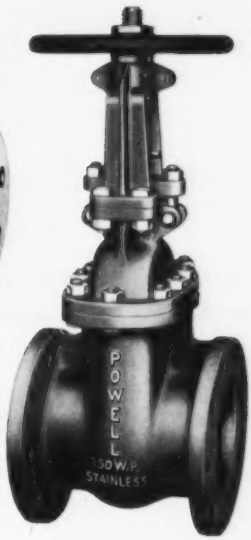

Fig. 2453-G—Large 150-pound Stainless Steel Gate Valve with bolted flanged yoke bonnet, outside screw rising stem and tapered solid wedge. →

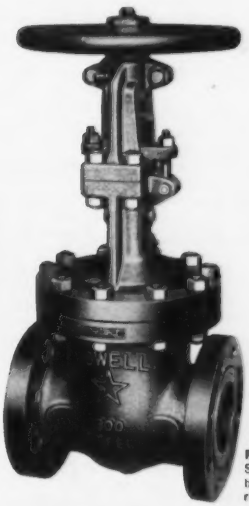

Fig. 3003—Class 300-pound Cast Steel Gate Valve with flanged ends, bolted flanged yoke, outside screw rising stem, tapered solid wedge.

Fig. 1708 — 200-pound Bronze Globe Valve with screwed ends, union bonnet, renewable, specially heat treated stainless steel seat and regrindable, renewable wear-resisting "Powellium" nickel-bronze disc.

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Asserts Profit Figures Alien to Economic Profits

NEW YORK — The profit figures achieved and certified by public accountants today are quite alien to economic profits, according to Roy A. Foulke, vice-president of Dun & Bradstreet, Inc. In "A Study of the Theory of Corporate Net Profits," published on February 1, Mr. Foulke shows how a combination of recorded facts, accounting conventions, and personal judgment results in "accounting" profits that often differ radically from real profits. The existing accountancy frame work is too rigid to reflect accurately the fluctuations of the "real" profit dollar, as it fails to take into mathematical computations depreciation on replacement values, and "accounting profits" due to inventory inflation.

The difference between "accounting" profits and "real" profits is sharply drawn by Mr. Foulke. Real profits are related to current values. Accounting profits are based upon recorded costs that were incurred over a period of time at changing price levels. The fallacy in comparing accounting profits of today with those of any other period is due to the fact that dollars of different values are involved for each period.

Corporations are forced by the accounting conventions to include depreciation charges that are insufficient during a period of rising prices to replace worn out equipment at the currently high price levels. Low depreciation charges help to give the illusion of high profits.

Similarly with inventories, many corporations unwillingly create the illusion of unusually high profits simply because of changing prices. A rise in price increases "accounting" profits as respective items in the inventory are sold. Corporate "accounting" profits in 1947, amounted to $18.1 billion of which $5.- billion represented inventory profits.

The real level of profits can be determined by its relationship with wages, dividends, and earnings generally. These relationships, worked out in considerable detail by Mr. Foulke, represent a more practical yardstick for measuring profits. According to the measures, real profits have not risen nearly as high as is indicated by the existing accounting profit figures.

Costs Threaten Market

SAULT STE. MARIE, ONT.—A tremendous jump in pulpwood production by Canadian pulp and paper companies last year netted over 11,000,000 cords. This announcement was tempered, however, by the fact that the cost of forest operations has more than doubled in the past ten years. Main cause of the big increase was reported to be higher wages to woods workers.

D. J. Munro, local woods manager of the Abitibi Paper Co. sounded a warning in respect to rising costs, said: "Naturally the rural areas have profited from these expenditures, but our ever-increasing woodland costs may tend to price us out of our markets. After all, Canada is not the only country in the world with forests, nor is the only country in the world with a large pulp and paper productive capacity. This trend of rising costs in the woods is of peculiar significance at a time when overseas markets for all types of pulp and paper products have been curtailed, and when for the first time in years the overall pulp capacity of North America is more than adequate to meet needs of our markets."

NAWMD Meeting

NEW YORK—H. L. Green, secretary of the Pacific Coast Division of the National Ass'n. of Waste Material Dealers, Inc., reports that division will hold three dinner meetings during February. The first will be held in Los Angeles, February 16, the second in San Francisco, February 21 and the third in Seattle, February 25.

The 36th Annual Convention of the National Ass'n. of Waste Material Dealers, Inc., will be held at the Stevens in Chicago from Monday, March 21 through Wednesday, March 23. From advance hotel reservations many of the delegates and their ladies are planning to arrive in Chicago on the preceding Saturday and Sunday. Arthur U. Claghorn is chairman and Louis Lippa is co-chairman of the convention committee.

Heads Kingsport Div.

KINGSPORT, N. Y.—George F. McCrea, has been appointed manager of the Kingsport Division of the Mead Corp. He succeeds Donald F. Morris, who has been elected vice-president in charge of procurement. Mr. Morris, who was general manager of the Mead plant here, is removing to the executive operating office in Chillicothe, Ohio, where his new duties will include direction and control of all Mead purchasing activities.

N. E. TAPPI, March 18

HOLYOKE, MASS.—The New England section of TAPPI, which held a technical conference at the Hotel Roger Smith last week, plans to conduct a similar session at its regular monthly meeting March 18 here.

There will be no meeting in February, its place being taken by the annual national convention in New York City the week of February 21.

Philip S. Bolton, research director of the Robert Gair Corp., will be chairman of the March conference, the subject of which will be "Dye Stuff and Paper Sizing."

Dr. William Wilson of the Merrimac Chemical Division of the Monsanto Chemical Co., in Everett, will give a paper on sizing, and T. J. Martone of the E. I. DuPont Co., will discuss "Reduced Vat Dyestuffs for the Paper Industry."

Waste Disposal Unit

KALAMAZOO—Six Kalamazoo River Valley paper mills have agreed to construct the first commercial-size waste-disposal unit in the history of this area at the plant of the Michigan Paper Co. at Plainwell as soon as details are completed.

Participating mills include Michigan Paper Co., Kalamazoo Paper Co., Rex Paper Co., St. Regis Paper Co., Watervliet Paper Co., and Allied Paper Mills. A nonprofit organization will furnish funds. A study to determine the flow and other technical factors will be made.

Name Four Paper Men

ADAMS, MASS.—Named members of the Northern Berkshire Flood Control Committee at a meeting held in North Adams on January 18 of industrial and business leaders and municipal officials of Adams, North Adams, Williamstown and Clarksburg, were the following representatives of the paper industry: A. Millard Daniels, president, and Rupert P. Daniels, superintendent of the L. L. Brown Paper Co.; Alan Limburg, president of Alanson Products, Inc.; and Henry J. Guild, vice-president and general manager of the Brightwater Paper Co.

Leisersons Buy Pub. Co.

GILBERTSVILLE, N. Y.—Alfred R. Leiserson and Virginia D. Lieserson have purchased the Journal Publishing Co. here. Mr. Leiserson until recently was general manager of the American Paper Co., Richmond, Va., and formerly was general manager of the Dennison Mfg. Co., Framingham, Mass. During World War Two he represented the paper industry on the WPB and OPA.

Regional Sales Manager

PHILADELPHIA.—O. B. Wilson, eastern regional sales manager of the Brown Instruments division of the Minneapolis-Honeywell Regulator Co., has been named manager of sales for the east, southeast and central regions. He will make his headquarters at the Brown plant here.

W. J. Alford III Advanced

RIDGEFIELD PARK, N. J.—W. J. Alford 3d has been appointed president of the Alford Cartons division of Continental Paper Co. He was formerly executive vice president.

FAST WORK!

It took the champion ten rounds to put the squeeze on the challenger — ten seconds to finish him . . .

To make paper or board your machine must combine plenty of squeeze at the presses with high speed at the drier rolls. This is where Hamilton Felts prove themselves champions!

Equip your machines with Hamilton Felts. Speed them up. Your sheets will be dried before the bell rings.

From the thinnest tissue to the heaviest board there is a Hamilton Felt that will do your work better, faster and at lower cost.

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Established 1858

Brown to Moyer & Pratt

LYONS FALLS, N.Y. — Charles J. Brown has been named New England representative of Moyer & Pratt, Inc., manufacturer of Lyonsdale wrapping and toilet tissue items. Previously Mr. Brown represented the J. P. Lewis Co., of Beaver Falls, N.Y., and the Brownsville Board Co., Brownsville, N.Y. More recently he was with the Providence Paper Co., Providence, R. I.

Stebbins' Hoberg Job

GREEN BAY, Wis.—Construction of the last of six new glazed tile beater stock chests is nearly completion at the Hoberg Paper Mills plant here under the direction of the Stebbins Engineering Co., of Watertown, N. Y. All of the chests are equipped with propellor-type agitation. Entire cost of the six chests is approximately $40,000.

Baums Form Chatham Corp.

CHATHAM, N.J.—Max J. Baum and Seymour M. Baum have formed the Chatham Tissue Corp., with offices and plant at 116 Summit Avenue, to manufacture and distribute facial and toilet tissues. Max J. Baum was formerly president of the Eastern Tissue Corp., Brooklyn, N.Y., and Seymour was associated with the same firm.

Acquires Berwin Equipment

LITITZ, Pa.—The Morgan Paper Co., Inc., of this city, has acquired the paper napkin converting equipment of the Berwin Paper Co., of Dansville, N. Y. Victor Cohen, of the Berwin Sales Co., 295 Madison avenue, New York City, has been appointed selling agent for the entire Morgan line.

Nat. Blank Book Election

HOLYOKE, Mass.—Joseph M. Towne was reelected president of the National Blank Book Co., on January 21; Edward S. Towne was reelected vice-president; Paul B. Buckwalter was chosen as a new vice-president, and Alton B. Hughes was reelected assistant treasurer and comptroller.

Building Paper Stock Plant

OAKLAND, Calif. — The Independent Paper Stock Co. is building a million-dollar plant on the block bounded by First, Second, Jackson and Madison streets. Completion of the building and installation of equipment is expected to be accomplished by October.

Westvaco X-Ray Clinic

COVINGTON, Va. — A mass X-ray clinic was set up in the West Virginia Pulp & Paper Co. plant on January 24. From Monday morning until Friday noon, Westvaco workers were X-rayed for symptoms of tuberculosis, free of charge.

Hunt Now Osborn V.P.

MARION, Ind.—Clifford Hunt has been elected a vice-president of the Osborn Paper Co.

Paper Company Moves

HOUSTON, Tex. — The Moore Paper Co. is moving from its old location at 119 McCall to its new building at 3820 Chenevert. The new premises occupy the entire block between Truxillo and Alabama on Chenevert. Besides two main office rooms, and a combination clubroom and kitchen for the employes, the new structure has a large warehouse which has trackage beside it.

New Ohio Corporation

DAYTON, Ohio—A corporate charter has been issued to the Hull Paper Co. by the Ohio secretary of state. The company is capitalized with 1,000 npv shares and was formed by Margaret W. Young, Howard H. Siegel, Evelyn J. Siegel and Raymond D. Merchant.

Resigns Chairmanship

HOLYOKE, Mass.—Fairfield Whiting, secretary of the Whiting Paper Co. and of Whiting & Co., on January 28, resigned from the gas and electric commission of which he was chairman, because of ill health.

Foxboro Enlarging Building

PITTSBURGH—Work has begun on an addition to the building at 5151 Baum boulevard, owned by the Foxboro Co., Foxboro, Mass., maker of industrial instruments for measurement and control.

Bunn New SAPI Member

NEW YORK—Alfred C. Bunn, Jr., representing the Berwin Paper Co., Inc., with offices at 295 Madison Avenue, has been admitted to membership in the Salesmen's Ass'n., of the Paper Industry.

Addresses Ad-Men

CINCINNATI — R. Calvin Skillman, director of publications for the Champion Paper & Fiber Co. of Hamilton, Ohio, addressed the Advertisers Club meeting at Hotel Gibson, January 12.

McGuire Newsprint Sup't.

GATINEAU, Que.—A. M. McGuire has been appointed newsprint superintendent at the Canadian International Paper Co. plant. He has been with the plant since it began operations in 1927.

Walker Berwick Dist. Mgr.

BERWICK, Pa.—The American Car & Foundry Co., named Nelson C. Walker district manager of its local plant, effective February 1.

Raybestos' Seattle Quarters

SEATTLE — Raybestos - Manhattan, Inc., has opened a warehouse and office at 314 Occidental avenue in charge of Russell G. Heuman.

Heads Wood Institute

BAGOTVILLE, Que. — George Henri Lavoie of this city has been named president of the Quebec Wood Institute.

Pollution Prevention Bill

WASHINGTON—Representative J. W. Byrnes (R., Wis.) has introduced H. R. 1343 "to encourage the prevention of stream pollution by allowing amounts paid for plants for the treatment of industrial waste as a deduction in computing net income."

Food Packaging Laboratory

MIDDLETOWN—A $150,000 laboratory for research and development in the food packaging field will be established at the Middletown plant of the Pollock Paper Corp., Leslie L. Jacobs, executive vice president discloses.

Standard Boosting Facilities

HOLYOKE, Mass. — The Standard Greetings, Inc., located in the Beebe-Holbrook mill at 380 Dwight street, will shortly take over the neighboring facilities at 384 Dwight street, Samuel Shaine, general manager reports.

10th Business Chart

LOCKPORT, N. Y.—The Upson Co., for the tenth consecutive year, is distributing to its jobbers and dealers the current annual edition of a "Business Booms and Depressions" chart.

Smith Addresses Ad Club

CHARLOTTE, N.C.—Karl Smith, manager of the Charlotte division of the Dillard Paper Co., was guest speaker at the January 25 meeting of the Charlotte Advertising Club.

Sears to Perfection Co.

CHICAGO — Wm. Sears has been named executive vice-president of the Perfection Paper Package Co. He was formerly with the Merle Sears Paper Box Co., Danville, Ill.

Berkshire Paper Service

DALTON, Mass.—The Berkshire Paper Service Ass'n., of 776 Main street, was incorporated on January 31 to provide transportation of paper and paper products. Authorized capital is 2,000 shares of common stock, with a par value of $10 per share. Officers include Hale Holden, president, and Walter F. Tatum, treasurer.

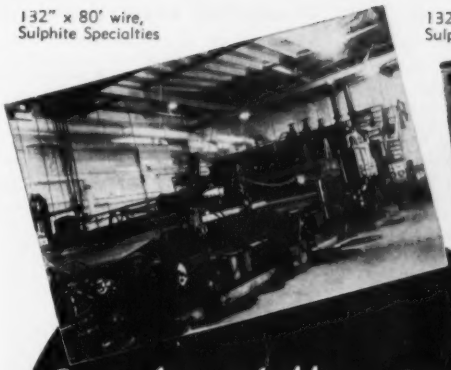
Rain Aids Hydro Plant

BOSTON, Mass. — Heavy and steady rainfall enabled the New England Electric System to generate three times as much electricity from its Connecticut and Deerfield River hydro-electric plants in the first three weeks of January as it did in the corresponding period in 1948, company officials said on January 31.

The New England Electric System is one of the major suppliers of power to paper manufacturers in the Connecticut and Deerfield River plants.

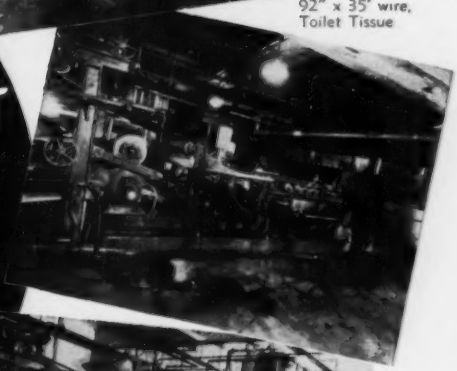
The system generated 95,000,000 kilowatt hours for the first three weeks in 1949, as compared with 32,000,000 for the 1948 period.

132" x 80' wire,
Sulphite Specialties



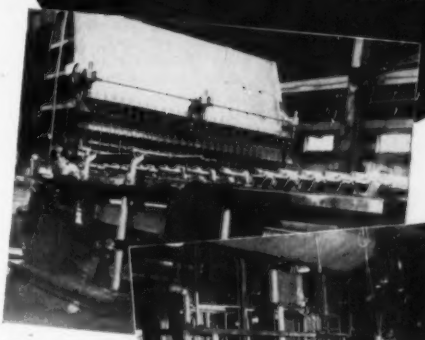
132" x 80' wire,
Sulphite Specialties

92" x 35' wire,
Toilet Tissue

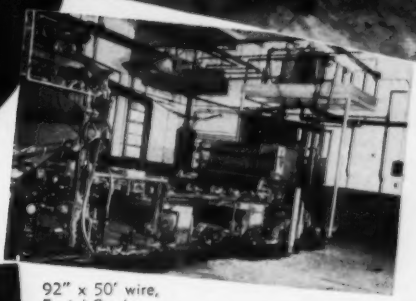


Sandy Hill Fourdriniers

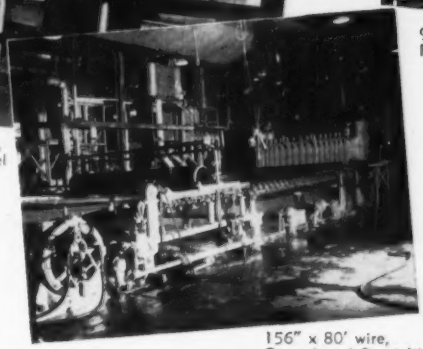
Some New Installations



156" x 65' wire,
Tissue and Towel



92" x 50' wire,
Facial Grades



156" x 80' wire,
Groundwood Specialties

SANDY HILL is prepared to build any type of paper machine fourdrinier, either for improvement of formation and production, or in combination with a complete machine.

Sandy Hill Iron & Brass Works

Hudson Falls, N. Y.

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Bertrams Flow Distributors
Bertrams Shakes
Nell on Slice
Feltless Wet Machines
"Selective" and Corner Drives
Fourdrinier Paper Machines
"Packer" Screens
Castings
Bleaching Equipment
Seofield Felt Conditioners
Cleveland Type Bearings
Shaker Screens

Canada's October Exports

OTTAWA — The Canadian Government reports that exports of newsprint paper from Canada to the United States showed a decline during October 1948, compared with the preceding month, involving 6,442,395 cwt., valued at $28,815,335 in October, compared with 7,378,394 cwt., at $33,208,928 in the previous month, with total Canadian shipments of newsprint to all countries in this period dropping to 7,207,999 cwt., at $32,965,895 as against 8,111,023 cwt., at $36,939,004 in the preceding month.

Shipments to the U. S., of newsprint paper in the first ten months of 1948 were 64,133,893 cwt., at $276,488,738 out of total exports to all countries of 70,735,694 cwt., at $310,918,638.

During the first ten months of 1948, Canadian shipments of newsprint paper to other countries included the following: United Kingdom, 1,051,765 cwt., valued at $4,602,891; Union of South Africa, 671,759, $3,236,631; Australia, 562,517, $2,745,649; China, 348,044, $2,408,776; Brazil, 458,715, $2,458,007; Argentina, 378,759, $2,192,825; Mexico, 403,122, $1,867,056; India, 240,961, $1,505,688; Cuba, 284,039, $1,306,668; Uruguay, 200,287, $1,099,724; Chile, 186,926, $959,977; Hong Kong, 102,397, $725,633; Eire, 109,146, $644,712; Greece, 110,749, $603,447; British Malaya, 67,200, $495,861, etc.

Procurement Authorization

OTTAWA—Canada's procurement authorizations totalled $592,753,276 to countries participating in the ERC during the nine months ended December 1948, by arrangement with the ECA in Washington, including $16,464,500 for woodpulp, $15,703,510 for paper and products, $826,000 for pulpwood, and $33,566,748 for lumber and sawmill products.

By countries, the Canadian authorizations under this program have involved Belgium, $100,000 for paper and products; Bizone Germany, $3,230,000 for paper and products; France, $364,500 for woodpulp; French North Africa, $27,000 for paper and products; Greece, $100,000 for paper and products; Ireland, $393,000 for woodpulp and $653,510 for paper and products; The Netherlands, $826,000 for pulpwood and $868,000 for lumber and sawmill products; United Kingdom, $22,700,000 for woodpulp, $4,600,000 for paper and products, and $30,624,000 for lumber and sawmill products.

B. C. Pulp Wood Report

VANCOUVER, B. C.—Sufficient pulp wood is now in the water in British Columbia to meet all normal wood requirements of pulp and paper operators for the next several months, according to R. E. Smith, president of Pacific Pulpwood, Ltd.

Pulpwood stocks at present are greater than they have been at any time for the past eight years, Mr. Smith said. He stated the utilization of logs was normal, but that the stock pile was considerably above normal.

Export of B. C., timber has dropped from 75 percent to 25 percent and pulp grades of hemlock, balsam and spruce are the first to be neglected. This fact, coupled with high production of logs during the summer logging season and absence of serious strikes and fire interruptions, has built up a surplus which is now being gradually utilized by the pulp mills.

George W. O'Brien, vice-president of the Powell River Co., said B. C. pulp mills have restored large inventories of logs and that the consequent lessening in demand for logs does not mean lower demand for the end product, paper.

Cigarette with Glass Paper

VRANE, Czechoslovakia — A local paper mill has succeeded, after several experimental trials, in manufacturing a cigarette with a mixture of non-inflammable glass fibers. A patent has been applied for. Chief advantage is that during smoking this non-inflammable fibre forms a net which holds the ash and thus prevents its falling. Proof of the value of the invention is shown by the interest which the Czechoslovak Tobacco Production is taking in it. After several experiments, the tobacco industry has started to manufacture the first series of cigarettes with this new paper. Several American firms are reported to have displayed interest in the new product.

Canadian Nov. Woodpulp

OTTAWA—Production of wood pulp in Canada totalled 633,000 tons in Nov. 1948, it is reported here, with mechanical pulp accounting for 377,800 tons and chemical pulp for 255,200 tons. Exports totalled 146,300 tons during this period. The output of newsprint in Canada totalled 397,300 tons in Nov. 1948, with shipments totalling 405,900 tons, involving domestic 25,600 tons and export 380,400 tons. Stocks of newsprint at the end of this period amounted to 75,300 tons, the report adds.

Won't Seek "Token" Deal

OTTAWA—It is understood here that there is no likelihood that the Canadian Government will proceed immediately to seek a "token" import arrangement with Britain in regard to New Zealand and Australia trade similar to the deals made with the British West Indies where such "token" shipments of paper and paper products as well as other items are now an actuality.

No Working Time Lost

OTTAWA—No working time was lost in labor disputes across Canada during November, 1948, in the pulp and paper products industry, the latest report of the Labor Department, Canadian Government, states.

Twenty Win $10 Prizes

VANCOUVER, B. C. — Twenty $10 prizes have been awarded to pulp and paper workers in British Columbia in the safety poster competition sponsored by B. C. firms in this industry. Five of the winners were awarded two prizes each for their idea on illustrating safety posters, said Cyril Hague, chairman of the safety committee of the western branch of Canadian Pulp and Paper Association.

The winners are: E. Hopgod of Victoria; Leonard G. Whalen of Port Alice; Campbell L. Bryson and Vincent I. Schulkowsky of Powell River; and B. Colton of Ocean Falls, two prizes each, and Charles Collicutt, Woodfibre; E. T. Tucker, Port Alice; A. R. Dixon and Harry Strilesky, Ocean Falls; D. Gant and J. D. Muzylowski, Port Mellon; W. W. Bennett, Port Alberni; W. R. Brown, E. G. Horrobin, Robert Hutchinson, Denmilne Green, David Evans and Peter Strettan, Powell River, and F. G. McCullough and R. J. Brooks, Cranberry Lake, single prizes.

Late Snows Stymie Woodcut

OTTAWA—An unofficial estimate of a possible loss of $27,500,000 by Maritime lumbermen resulting from the late arrival of snow in some parts of Canada has been made, with the movement of the woodcut from back lots to mills and railway sidings in Nova Scotia and New Brunswick said to have received a bad setback on account of these abnormal conditions. At least one-fifth or one-sixth of the time usually counted upon to get out the cut has been lost this year.

Young to Victoria

VICTORIA, B. C.—Percy Young, assistant district manager at Nelson, B. C., for the B. C. forest service, has been transferred here and will assume the duties of assistant forester in the operations branch at the parliament buildings. Mr. Young will be succeeded as assistant district manager at Nelson by I. T. Cameron of Kamloops, B. C., but his work in the operations department will be handled by J. R. Johnson of Victoria.

More Asbestos Paper

OTTAWA—Producers' shipments of asbestos paper stocks in November, 1948, advanced to 9,206 tons compared with 6,808 tons in the same month of the preceding year and increased to a total of 77,854 tons in the first eleven months of 1948 as against 76,442 tons a year ago in the same period, the Canadian Government has just reported.

Pulpwood Output Drop

OTTAWA—T. S. Jones, manager of the Thunder Bay Timber Operators Ass'n., reports that pulpwood production in northwestern Ontario will this year be below last year's record of 1,500,000 cords because mill stocks have been built up to pre-war normal.

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The plantations they manage have always been noted for the careful preparation of their product and the H. & C. mark has long enjoyed a world-wide reputation for reliability. The establishment of H. & C. Latex Ltd. with the most up-to-date equipment, under the supervision of a staff of experienced rubber chemists and engineers, should therefore be welcomed by all users of Natural Rubber Latex, who can be assured of a high quality and uniform product.

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Blast Crumbles Wall

CHESTER, Pa.—A coal-dust explosion blew a wall out of a building at the Scott Paper Co. plant in Chester on January 14. Debris was scattered over a 100-foot area. The explosion was in a coal storage building of tile-block construction. It occurred in a pulverizing unit, where coal was being ground into powder for consumption. Although the structure has only one floor, the wrecked wall was about three stories high. Firemen were ordered off the scene when another wall buckled, and precautions were taken against its falling. The paper company stated that operations would be unhampered by the accident.

Young Addresses Engineers

NEW ORLEANS — Ventress Young, vice-president of the Gaylord Container Corp., Bogalusa, La., spoke at the meeting of the Louisiana Engineering Society at the St. Charles Hotel, January 13-15. Telling his audience of some 500 about Gaylord's timber plantations at Bogalusa, he said in part:

"The growth on the first plantation harvested was 30 cords of wood per acre in 24 years, which means a rate of 1¼ cords per acre per year. The average for the South is not over four-tenths of a cord per acre per year."

Long Strike Ended

HINSDALE, N. H.—Owners of the Robertson Co., and Ashuelot Co., papermills, report that the AFL Papermakers' Union strike, in effect since September 21, was called off on January 21. The AFL contract expired September 1. The men who had been on strike for 17 weeks returned to work on terms offered by the paper company. These included an eight-cent-an-hour increase in pay, additional insurance, and increased vacations.

Neither company now has a contract with the union.

No-Lost-Time Record

NEWBURGH, N. Y. — The Newburgh Paper mill, owned by the National Gypsum Co. came through with flying colors for 1948 with a No Lost Time Safety record. This mill was in competition with two other paper mills owned by the company, and 19 other plants, such as rockwool, lime, plasterboard and steel plant. "The Newburgh plant safety record was successful through the guidance of John Siskoski, plant safety supervisor, with the 100 percent cooperation of the plant foremen," W. T. Cabe, plant manager, reports.

Deggeller Succeeds Daniels

HOAQUIM, Wash. — E. W. Daniels, chairman of the board of the Harbor Plywood Corp., announced the acceptance of his resignation as president and general manager effective February 28, and the election of Martin N. Deggeller to succeed him in those posts effective March 1. Mr. Daniels will continue as board chairman and will devote himself to Harbor Plywood activities. Elected to the board of directors also at the meeting held on January 14, 1949, was C. H. Kreienbaum,. president of Simpson Logging Co.

Converters Wage Boost

VANCOUVER, B. C.—Wage increases ranging from ten to 21 cents per hour have been granted to 75 employes of Smith, Davidson & Wright, Ltd., wholesale paper merchant firm. Average wage in the plant is now 85 cents an hour. The new contract also provides for nine statutory paid holidays, one week's paid holidays after one year, two weeks after two years, and union security. Contract has also been renewed with Pioneer Envelopes, Ltd.

BMT Ups Thiery

SACRAMENTO, Calif. — Blake, Moffitt & Towne have named Joseph H. Thiery manager of the Sacramento division succeeding J. H. Leatherman who has resigned to enter business for himself. Mr. Thiery, who has held the position of general sales manager for the Northern California area for several years, first was employed by the company in Oakland 22 years ago, starting as a warehouse employe.

Plans Paper Box Plant

OAKLAND, Calif. — A $300,000 paper box factory is being projected by the Longview Fibre Co., a subsidiary of the General Fibre Box Co. Borings are being made on property it owns at San Leandro boulevard and 85th avenue for foundation information. Plans still are in the sketch stage, H. L. Hollenbeck, president, states. Contractors probably will be Wagner & Martinez, of San Francisco.

Surveying Pakistan Project

KARACHI, PAKISTAN—(Delayed in transmission) Project Engineer MacArthur, of the Stedler Hunder Co. of Montreal, Canada, accompanied by M. A. Khan, Deputy Development Officer in the Directorate of Supply and Development, of the Pakistan Government, left this city for Dacca on December 28, to make a survey of the proposed East Pakistan paper mill project.

Detzer Sons Succeed Dad

TOLEDO, Ohio—Harry J. Detzer, Sr., president of the Toledo Blue Print & Paper Co., whose name has been proposed as a compromise candidate for the vacancy in the City Council, said he is resigning soon as president of the paper company which he founded in 1908, and will turn operation over to his sons, James and Harry J. Detzer, Jr.

Closing Boston Office

SOUTH HADLEY FALLS, MASS.—Texon, Inc., is closing its Boston sales office on February 1 and are consolidating it with the firm's general, administrative and sales offices here. The telephone is Holyoke 4501.

Kress Modernization

PITTSBURGH — The F. J. Kress Box Co. has completed remodeling its manufacturing facilities, officials report. This program, they explain, included installing the most modern equipment and the most advanced plant layout in the corrugated container industry.

The plant covers four acres along Twenty-eighth street, and has shipping facilities on both the PRR and B&O railroads.

In addition, the company uses a fleet of 30 trailer trucks to make deliveries both to the small lot user and the carload buyer.

B. F. D. Resumes Production

PLATTSBURGH, N. Y.—The B.F.D. Co. has resumed full production at its Plattsburgh mill, damaged by fire in November. The Ogdensburgh B.F.D. factory supplied by the local plant also has called back about 315 employes. J. O. Julson, general superintendent here, reported that the mill's four paper machines were back in operation and that all of the 800 employes had returned to work.

Eleventh Converting Plant

LONG ISLAND CITY, N. Y. — Samuel Kipnis, president of National Container Corp., reports that the company, through its wholly-owned subsidiary, National Container Corp. of Wisconsin, has leased a building in Milwaukee where it will make corrugated shipping containers. With this acquisition, the company will operate 11 converting plants in 11 cities and four pulp and paperboard mills.

To Address Controllers

DALLAS, Tex. — Claiborne Johnson, controller of Fleming & Sons, Inc., will speak on "Being Realistic in Reporting Income," at the Southern Regional Conference of the Controllers Institute of America, to be held February 4-5 in the Baker Hotel.

Seek Ass'n. Membership

CINCINNATI — Henry O. Bush of Bush Bros., Champaign, Ill., and Sheldon Brooks of The Marathon Corp., Cincinnati, have applied for membership in the Paper & Twine Assn., Secretary-Treasurer John L. Richey, reports.

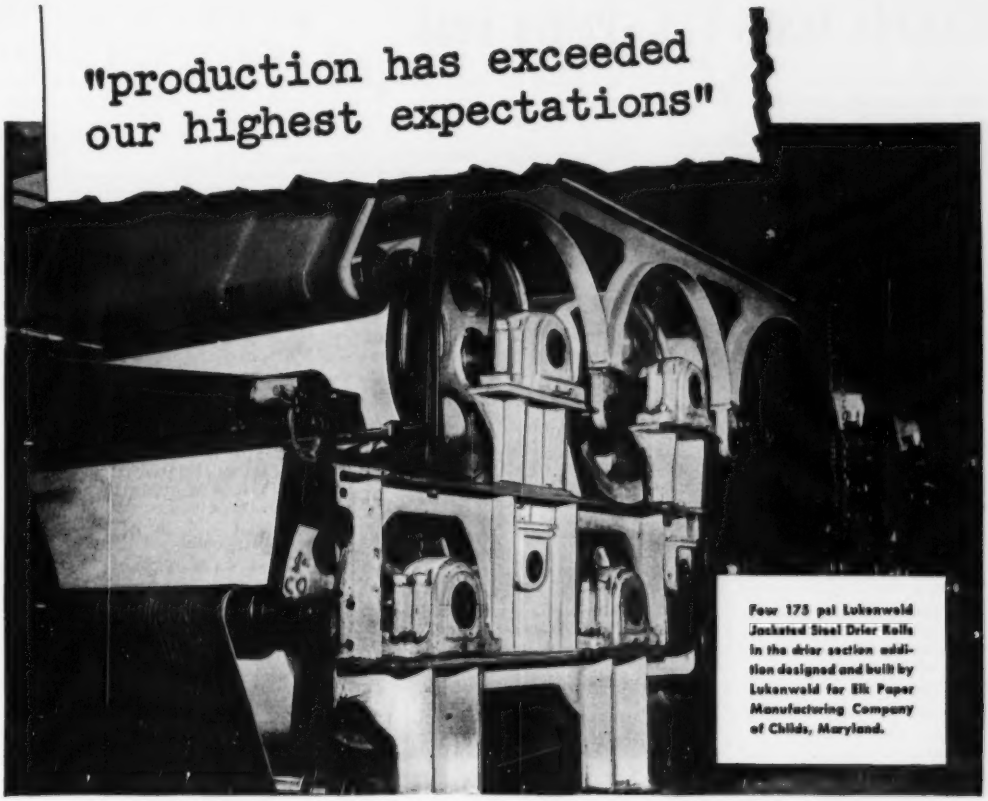
100 Days, No Accidents

LEE, Mass.—For the first time in five years, Group 3 of the Smith Paper Inc., comprising workers in the most hazardous occupations in the mills, have gone more than 100 days without a lost-time accident.

Warren Sales Meetings

WESTBROOK, MAINE—The S. D. Warren Co. on January 22 finished a series of four consecutive sales conferences of three days each at the Cumberland mills, with approximately 80 merchant salesmen attending.

"production has exceeded our highest expectations"



Four 175 psi Lukenweld Jacketed Steel Drier Rolls in the drier section addition designed and built by Lukenweld for Elk Paper Manufacturing Company of Childs, Maryland.

...with this Lukenweld drier section addition

Co-operation between operating men with drying problems and Lukenweld engineers brings in frequent reports like this one from Elk Paper—increased output, higher quality production, safer operation.

As designers and manufacturers of complete drying machinery, we at Lukenweld are well acquainted with drying operations in many industries. We'll take your ideas and put them to work—first a design on paper, then a pilot model if desirable, a finished machine or structure, and its installation. Lukenweld service is that complete.

If the job calls for Drier Rolls... Hundreds of Lukenweld Jacketed Steel Drier Rolls, in service today in the paper, chemical, drug, food, plastic and other industries, are proving they'll do the job faster, better and safer. *Faster* because of reduced wall thickness and positive scavenging of entrapped air, condensate and film from steam passages, assuring higher efficiency. *Better* because surface temperatures are even and constant. *Safer* because of their high-strength, steel plate construction.

For drying help, or for Bulletin 358 telling about Lukenweld Drier Rolls, write Lukenweld, Division of Lukens Steel Company, 403 Lukens Building, Coatesville, Pennsylvania.

We'll lend you "LUKENWELD", a 16mm motion picture with sound, highlighting our methods, facilities and products. Running time: 20 minutes. Write for booking date.

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Canada Scans U. K.-Polish Deal

OTTAWA—With some foreign markets likely to be affected by currency difficulties in the near future as others have already been influenced, Canadian paper interests are watching developments arising from the growing trend towards barter deals between the United Kingdom and European countries as well as between various European nations. Unofficial estimates here are that between 100 and 150 barter or bilateral deals are now in existence.

Already some anxiety has been detected as a result of the United Kingdom's five-year-billion dollar pact with Poland which exchanges products of the two countries and which involves items in which Canada has a keen interest. "What," it is asked in trade circles, "is to stop other such deals on even a larger scale being made to cause losses of traditional markets for Canada?"

As a result of these growing barter or bilateral deals, there is unusual interest here now in the coming meeting scheduled in London, Eng. between top-level representatives of Canada and the United Kingdom, with this being a meeting of the so-called "special permanent joint trade committee." Perhaps, the meeting may gradually unfold what policies will be followed, particularly in view of the growing anxiety over barter or bilateral deals involving the United Kingdom which has been considered traditionally a sure market for Canadian products but which is not so sure now since the pact with Poland, including therein products which Canada might have sent to U. K.

This important committee is made up of the following Canadians: Norman Robertson, high commissioner for Canada in London, Eng.; Max W. Mackenzie, deputy minister of trade and commerce; Dr. S. H. G. Barton, deputy minister of agriculture; and J. J. Deutsch, director of economic relations, Department of Finance. For the United Kingdom, the committee includes Sir Alexander Clutterbuck, U. K. high commissioner in Canada; Sir John Woods, permanent secretary to the Board of Trade; and Sir Henry Wilson Smith, second secretary for Overseas Finance in the Treasury.

Alkali Outlook Brightens

WASHINGTON—A marked improvement in the alkili situation, attributed to easing home demand and an increase in facilities, was reported by the Department of Commerce in the year-end summary of industrial chemical production.

Soda ash supplies are considered sufficient for domestic requirements as well as those abroad. The caustic soda position has improved and increasing amounts of solid and flake caustic have become available for export, said the department. An important factor in the solid caustic export situation, it was stated, was the action of the Government of India suspending the licensing of imports of alkalies from dollar and hard currency countries. India, in turn, was able to take such action in view of availability of large stocks of caustic soda and soda ash in India.

In this connection, and from other sources than this report, advices to this government indicate that four new plants, for which equipment have been ordered, are expected to treble India's present 3,000 ton per annum caustic soda output. This is against a demand for 70,000 long tons.

India's production of soda ash is reported at 30,000 tons, although capacity is larger. Difficulty in supplying cheap salt is said to be an obstacle.

In any event, reports to this Government show India and Pakistan greatly interested in augmenting their caustic soda and soda ash supplies from domestic output.

Earlier in the year, it will be recalled, the Government outlook on supplies of alkalies was such that industry advisory conferences were held at some length before it was decided that the situation was easing, both with respect to export potentialities and its effect on the home supply.

Brazil is another foreign outlet, caustic soda imports from the United States ranking among the ten principal imports for the first quarter of the past year, the latest for which figures have been reported.

Here, as in India, official reports to this Government indicates a strong effort is under way to develop home production. An important Brazilian chemical organization has proposed construction of an alkali plant adjacent to a 100,000,000-ton salt deposit at Contiguiba, Sergipe, Brazil; a second company also has offered to construct a plant in the same vicinity.

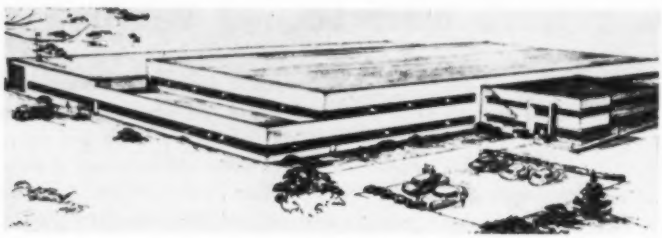
Brazil's alkali situation began to improve during 1948, it was reported, although imports were consistently below the requirements. It was reported that both caustic soda and soda bicarbonate from the United Kingdom were underselling the same products from the United States.

Labrador Next?

OTTAWA—Following in the wake of the start being made this year in the $250,000,000 project to bring into production the Quebec-Labrador iron ore fields, it is forecast that forest industries may ultimately be developed in that area, with the aim to make maximum use of the forest resources there in line with anticipated other developments planned for the region. The main species found in the region include poplar, jackpine, white birch, balsam and spruce.

Laud Duluth Safety School

CHICAGO—Fred T. Morrish, chairman of the Visual Aids Committee of the Pulpwood Logging Division of Pulp and Paper Safety of the National Safety Council, reports a helpful and worthwhile safety conference at the Northwest Paper Co. at Cloquet, Minn., sponsored by the Pulp & Paper Section of the Duluth Chamber of Commerce Safety School. The school takes in all the northern Minnesota mills and the Canadian mills of the Ontario-Minnesota Pulp & Paper Co.,



NEW MARATHON CONVERTING PLANT

This large plant in Wausau, Wis. expected to be completed next fall, will house under one roof the production of paperboard food packaging now carried on in the two converting plants of the Marathon Corp., in that city . . . Products to be manufactured in the new plant include cartons for ice cream, butter and other dairy products, Paraply baked goods packages, cartons for the frozen foods industry, paper pails, dishes and other board packages for the retail dispensing of foods, and frozen food locker packages for packaging fruits and vegetables . . . Covering an area of 226,260 square feet, the new building will have three sections a two-story manufacturing unit; a two-story office and employe services unit; and a one-story warehouse unit . . . The plant is so designed that machine lines can be expanded 100 percent over current production in major operations . . . Among the modern features are windows of double construction, the outer of the two panes being heat absorbing glass, to help keep the building cooler in the summer and warmer in the winter; a ventilation system that can change the air 16 times per hour; and arrangement of the warehouse and first floor of the factory on the same level for ease in transporting raw materials to machine lines . . . A first aid unit and conference room large enough for training classes is included in the office and employe services unit.

1948 Per Capita Paper Use Estimated at 356.9 Lbs.

Record paper consumption in 1948 raised per capita consumption for that year to an estimated 356.9 lbs., an increase of 14 pounds over 1947, according to the December *Statistical Summary* of the American Paper & Pulp Ass'n., just issued. The *Summary* states that prospects for the industry in 1949 are related to prospects for general industry, in that the paper industry is a "service" industry, the welfare of which is tied in closely with that of general business. A further analysis of the industry's 1949 prospects brings out the fact that inventory building by customers has apparently ceased and that 1949 demand for paper should more closely reflect actual consumption. Pulpwood, wood pulp and waste paper remain in ample supply. Estimates place total receipts of pulpwood for 1948 at a million cords above 1947. Wood pulp production in 1948 reached a new record high of approximately 13,000,000 tons. Waste paper receipts for 1948 reached an estimated 7,500,000 tons, a decline of 300,000 tons under 1947 because of the tapering-off in demand.

Ltd., at Fort Frances and Kenora. The safety group visits each member firm and the lunch periods are utilized for discussion, so that as much time as possible may be spent in plant inspections. Great direct benefit is obtained from these get-togethers, those attending assert. The Duluth Safety School was started on December 1, 1948, and will continue with one meeting per month until April, 1949.

What Are Good Standards?

NEW YORK—Publication in a single pamphlet of a sereis of papers on the subject "What Good Are Standards?" is announced by the American Standards Ass'n. The papers which were presented at the 1948 annual meeting of the Association, include discussions of such important problems as the legality of standardization, the standardization of the Munitions Board, and the functions of standardization in such company operations as purchasing, manufacturing, and marketing. The importance of standardization to wholesalers and retailers, and to the ultimate consumer, as well as to manufacturers, is taken up by authorities in each field.

Moley Convention Speaker

NEW YORK—Raymond Moley will be the featured speaker at the 88th annual meeting of the Writing Paper Mfr's. Ass'n. at the Waldorf Astoria hotel, New York, February 22. He is scheduled to discuss government policies and plans and their effect on our economy. Mr. Moley, who has written extensively on U. S. political and economic affairs, is a member of the editorial board of *Newsweek*, and is professor of public law at Columbia University. He was a Presidential advisor in the early days of the New Deal.

Canada Newsprint Exports

OTTAWA—The Canadian Government reports that exports of newsprint paper to the United States from this country advanced to 6,966,262 cwt., valued at $31,258,214 during Nov., 1948, compared with 6,442,395 cwt. at $28,815,335 in the preceding month, reaching a total of 71,100,155 cwt., at $307,746,952 for the first 11 months of 1948 out of total shipments to all countries by Canada during this period of 78,321,667 cwt., worth $345,451,228.

Canadian newsprint paper shipments in the Jan.-Nov. period of 1948 went to the following countries: United Kingdom, 1,137,613 cwt., $4,-980,303; Eire, 109,146, $644,712; British East Africa, 999, $6,832; S. Rhodesia, 11,281, $52,-607; Union of South Africa, 722,970, $3,514,-132; G. Coast, 218, $1,172; Nigeria, 2,592, $19,-388; S. Leone, 200, $1,215; B. Sudan, 3,340, $30,148; India, 258,866, $1,612,419; Pakistan, 40,614, $240,820; Ceylon, 34,263, $186,706; B. Malaya, 67,200, $495,861; Bermuda, 8,207, $43,-506; B. Guiana, 15,074, $94,788; B. Honduras, 1,306, $8,912; Barbados, 2,101, $12,816; Jamaica, 52,423, $286,907; Trinidad, 22,712, $124,-974; Bahamas, 992, $6,646; Leeward Windward, 2,355, $16,233; Hong Kong, 112,012, $790,449; Newfoundland, 18, $138; Australia, 715,137, $3,537,421; Fiji, 750, $4,167; New Zealand, 347,885, $1,682,565; Burma, 1,118, $6,752; Abyssinia, 1,002, $7,804; Argentina, 379,780, $2,198,-733; Bel. Congo, 4,771, $35,034; Bolivia, 23,213, $128,232; Brazil, 478,230, $2,577,155; Chile, 190,766, $979,435; China, 348,044, $2,408,776; Colombia, 224,448, $1,262,977; C. Rica, 11,169, $65,984; Cuba, 284,615, $1,309,346; Ecuador, 50,333, $256,383; Egypt, 20,281, $104,092; Germany, 1,232, $4,651; Greece, 121,293, $662,049; Guatemala, 27,191, $149,685; Hayti, 2,439, $18,-998; Honduras, 769, $4,741; Iraq, 590, $3,488; Japan, 3,942, $28,529; Korea, 395, $2,770; Mexico, 449,763, $2,091,330; Morocco, 2,272, $12,269; Netherlands, 2,799, $13,459; Netherlands East Islands, 5,935, $43,283; Netherlands Guiana, 615, $4,092; Netherlands West Indies, 2,771, $16,398; Nicaragua, 5,149, $38,788; Panama, 58,725, $301,687; Iran, 5,817, $32,871; Peru, 67,444, $353,515; Portugal, 9,611, $61,-401; Port. Africa, 5,687, $32,036; Salvador, 21,581; $173,654; San Dom. 4,378, $25,758; Siam, 997, $7,238; Spain, 7,333, $36,827; Alaska, 3,109, $14,522; Virgin, 20, $117; Guam, 5,086, $23,805; Hawaii, 123,368, $552,477; Phil., 69,822, $518,823, P. Rico, 171,826, $850,434; Uruguay, 235,311, $1,300,295; Venezuela, 106,-198, $588,596; United States, 71,100,155, $307,-746,952.

Canada to U.S.

OTTAWA—The Canadian Government reports that exports of paper and paper products to the United States during the first 11 months of 1948 were as follows, with figures showing total Canadian shipments to all countries being given in brackets to indicate the huge proportion of such exports sent to U.S. during this period:

Wood pulp sulphate kraft bleached, 4,214,976 (4,236,342) cwt., $29,759,569 ($29,937,120); wood pulp sulphate kraft unbleached, 2,496,831 (2,856,679), $14,845,964 ($17,140,179); pulp sulphite bl. dissolving, 4,542,007 (5,597,191) cwt., $33,211,850 ($41,559,201); pulp sulphite bl. paper grades, 4,183,093 (4,438,109) cwt., $27,-523,916 ($29,755,253); pulp sulphite unbl. strong, 5,012,170 (6,086,817) cwt., $28,549,778 ($34,971,878); pulp sulphite unbl. news grade, 3,136,953 (3,354,097) cwt., $17,453,940 ($18,-700,508); wood pulp mechanical, 4,797,107 (5,-469,117) cwt., $15,052,900 ($17,763,321); wood pulp n.o.p., 473,005 (473,005) cwt., $3,073,014 ($3,073,014; wood pulp screenings chemical, 214,-387 (214,387) cwt., $465,731 ($465,731); pulp screenings mechanical, 150,273 (157,653) cwt., $77,857 ($87,986); pulp and fibre wallboards, 2,798 (283,072) cwt., $18,933 ($1,354,767); pulpboard for wallboard, 541,207 (541,207) cwt., $2,024,216 ($2,024,216); paper board n.o.p. 691,-130 (1,662,552) cwt., $3,023,169 ($9,118,398); book paper, 479,394 (700,273) cwt., $2,874,648 ($5,507,334); newsprint paper, 71,100,155 (78,-321,667) cwt., $307,746,952 ($345,451,228) wrapping paper coated, 8 (57,642) cwt., $122 ($678,535); wrapping paper kraft n.o.p., 64,167 (178,654) cwt., $412,194 ($1,391,466); wrapping paper n.o.p., 36,162 (133,767) $202,517 ($993,-255); bond and writing paper uncut, 110 (94,-928) cwt., $1,822 ($1,401,224); bags of paper, $18,827 ($394,281); boxes and cartons of paper, $166,294 ($1,248,080); hangings or wall paper, 862,665 (1,526,320) roll, $311,166 ($412,980); roofing and building paper, 2,360 (96,807) cwt., $9,260 ($472,999); waste paper n.o.p., 273,390 (273,841) cwt., $526,500 ($527,791); handkerchiefs tissues of paper, $96 ($18,820); napkins and towels of paper, $37,752 ($106,402); tissue paper, 2,194 (15,021) cwt., $18,186 ($196,393); toilet paper, 50,895 (101,780) cwt., $686,191 ($1,333,604); writing paper n.o.p. envelopes, $3,111 ($207,310); paper and manufactures n.o.p., $57,050 ($969,263).

Timber Rights Granted

MONTREAL—Granting of timber rights for establishment of a ten million dollar pulp mill in Alberta to interests represented by R. O. Sweezey of Montreal, has been decided upon by the Province of Alberta. It is expected that the site of the mill will be at Clover Bar on the Saskatchewan River, just east of Edmonton and alongside natural gas pipelines that supply the oil refinery.

Hoberg Suggestion Plan

GREEN BAY, Wis.—Expansion of the employes' suggestion plan at the Hoberg Paper Mills during 1949 is being sought by Robert Minahan, chief engineer, who heads the suggestion committee and handles correspondence with employes. The committee, composed of all operating department heads, meets at intervals of not less than two weeks, and decides on the most meritorious offerings. A total of 108 suggestions were received in 1948.

G. & N. Appleton Deal

APPLETON, Wis.—The Appleton Machine Co. has been designated sole manufacturer of Gilbert & Nash wire and felt guides under an agreement with the Gilbert & Nash Co. of Menasha. The change was effective on January first. This equipment will continue to be manufactured under the firm name of Gilbert & Nash as a division of the Appleton Machine Co. There will be no change in the G. & N. organization and C. O. Baetz will continue with the Appleton Machine Co. Sales will be handled through G. & N. with Appleton sales engineers and sales representatives acting as selling agents.

The building formerly used for the manufacture of Appleton supercalender rolls, vacated late in 1948 upon completion of the new roll shop, has been refitted and tooled for machining and assembling the wire and felt guides. Finished and unfinished parts on hand have been transferred from Menasha. A new catalog will be published as soon as revisions are completed.

Communications may be directed to Gilbert & Nash, Menasha, as before, or to the Gilbert & Nash Division of the Appleton Machine Co., Appleton.

Simonite Fiber Strapping

BEDFORD, Ind. — The Simonite Co. has been incorporated, L. A. Simons, its president, has announced. It will produce "Simonite" strapping, designed to replace steel strapping for many uses.

Simonite strapping is the outgrowth of Simonite weaving material invented by Mr. Simons in 1931.

The fibre strapping will be made in different widths and thicknesses to meet strength requirements. It will not rust or stain and will not cut or mar the package, Mr. Simon states. A double-duty strapping with 1,600 pounds tensile strength suitable for tying bales and other heavy objects will be available by April. "We also will have strapping made in colors and with the customer's name stamped on the strapping," he added.

Mr. Simons has also invented a stretcher to enable tightening and a tie fastener for the strapping.

New Goodrich Line-Up

AKRON, Ohio — The industrial products sales division of the B. F. Goodrich Co. has become the industrial and general products division and now includes plastic products sales and production departments. E. F. To. linson is division general manager. Mr. Tomlinson states that Clyde D. DeLong has been named manager of the plastic products sales department, which will be moved from Akron to the company's plant near Marietta. Koroseal materials are the plant's principal output. Bert S. Taylor is plant manager.

Going to Marietta with Mr. DeLong will be W. M. Gaston and R. W. Wisnom, handling consumer markets; R. L. Hill, R. R. Speicher and C. J. Mischler, handling industrial markets and N. P. Singleton, handling packaging markets.

L. H. Chenoweth will remain in Akron on special assignments for the plastics department. E. Y. Byan has been transferred to the special industrial merchandise department of the division.

Northern Eqpt. Changes

ERIE, Pa.—The Northern Equipment Co., manufacturer of Copes feed water regulators, pressure reducing valves, desuperheaters and allied equipment, reports that Harold A. Schlieder has resigned as chief engineer to open his own office at 520 Robineau Road, Syracuse, N. Y., as sales and service representative in upper New York State.

Francis W. Bunting, who joined the company as a service engineer in 1935 and who has been assistant chief engineer for the last two years, has been named chief engineer in charge of all sales and service engineering.

Harry H. Weining, with the company since 1925, has been placed in charge of production engineering in addition to his duties as director of research.

Pennsalt Honors Employes

PHILADELPHIA—Leonard T. Beale, president of the Pensnlyvania Salt Mfg. Co., is one of eight employes in the local office and the Whitemarsh laboratory who have been honored with pins denoting 20 years of service with the chemical company. Five employes received honors for 15 years of service, six for ten years with the company, and 25 for five years' service.

Harris-Seybold Promotions

CLEVELAND—H. A. Porter, vice-president in charge of sales, has announced the promotions of three: R. S. Cheheyl has been appointed resale products manager in Harris-Seybold's home office sales organization: A. S. Holford, formerly sales office manager, assistant to the vice-president in charge of sales; and J. H. Whipp, sales office manager succeeding Mr. Holford.

Gegenheimer Upped

NEW YORK — Harold W. Gegenheimer has been named manager of the printing machinery division of the Electric Boat Co. He will be in charge of sales, service and engineering and will temporarily assume the duties of sales management in place of Stuart E. Arnett, resigned.

Latimer to Moore & White

NEW BRUNSWICK, N. J. — Thomas Latimer, formerly vice-president and chief engineer of the John Waldron Corp., has been named chief engineer of the Moore & White Co., Philadelphia, manufacturer of paper-making machinery.

Brown Instrument School

PHILADELPHIA — Industrial instrument maintenance and repair courses which have been conducted for the past 15 years by the Brown Instruments Division of the Minneapolis-Honeywell Regulator Co. will be divided during the first six months this year into four classes of five weeks each, and longer courses for company personnel. M. J. Ladden, head instructor of the school, states that the course for company personnel, to start February 21, will be sub-divided into specific classes for instruction in millivoltmeters, mechanical pyrometers, continuous balance electronic potentiometers, electrically operated automatic control, flow meters, thermometers, pressure gauges and hygrometers, air-operated control, Moist-o-Graphs, tachometers, resistance thermometers, CO_2 and analygraph. The five-week classes will continue through to June 17.

Fairbanks-Morse Changes

CHICAGO — Promotions and changes in the sales division of Fairbanks, Morse & Co., announced by Robert H. Morse, Jr., vice-president in charge of all operations of the company, include: O. O. Lewis, who until a short time ago was assistant sales manager, now sales manager; Harry L. Hilleary, for 17 years manager of the St. Louis branch, transferred to Chicago headquarters as assistant sales managers; L. A. Weom, manager of the pump division, transferred to St. Louis to succeed Mr. Hilleary; and Danald T. Johnstone, assistant manager of the pump division, to succeed Mr. Weom as manager of the pump division with offices in Chicago.

Jenssen Resigns Presidency

WATERTOWN, N. Y.—Jacob D. Jenssen has resigned as president of the G. D. Jenssen Co., Inc., but will continue his association with the firm as technical consultant and advisor to the board of directors. F. J. Hoar has been elected president and treasurer and F. S. MacDonald of Montreal, vice-president. Mr. MacDonald is also associated with Homad Service Ltd., and will continue his association with that company.

New Carthage Co. Owners

CARTHAGE, N. Y.—C. Walter Clinch, of nearby Liverpool, formerly of the Twin Villages, and William G. Lewis, Jr., of Watertown, who is foundry superintendent of the Cathage Machine Co., have purchased from Charles I. Ruderman of Gouverneur, the Ryther & Pringle Co., Carthage's oldest established industry.

Pennsalt Appleton Office

APPLETON, Wis. — The Pennsylvania Salt Mfg. Co. opened a new district sales office here on January 1, for its heavy chemicals division with C. H. Anderson, formerly of Pennsalt's Chicago office, in charge.

Last Year's BEST SELLER

B&W Recovery Units

Yes, two-thirds of the 12 new recovery units ordered in 1948 will, when completed, bear the familiar B&W nameplate. Highlighting these orders are two 250-ton units for the first mill ever to employ the kraft process for producing dissolving pulp from hardwoods for rayon manufacture, and a 125-ton unit for use in a first semi-chemical process employing chemical and heat recovery in converting hardwoods into box board.

This preference for B&W units clearly indicates how completely they meet modern pulp mill standards of efficient chemical recovery and reduction, high steam capacity, continuity of service, maintenance simplicity, operating reliability and overall economy. Make your next recovery unit a B&W to be sure of the last word in this type of equipment.

. . . Preferred on 8 out of 12 New Contracts

Calcasieu Paper Co., Elizabeth, La.

Hollingsworth & Whitney Co., Mobile, Ala.

Camp Mfg. Co., Franklin, Va.

West Virginia Pulp & Paper Co. (2 units)

Southern Kraft Corp., Natchez, Miss. (2 units)

American Pulp & Paper Co., Filer City, Mich.

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THE BABCOCK & WILCOX CO.

GENERAL OFFICES: 85 LIBERTY ST., NEW YORK 6, N. Y. WORKS: ALLIANCE AND BARBERTON, O.; AUGUSTA, GA.

FOR PAPER MILLS—B&W Recovery Units . . . B&W Integral Furnace, Stirling, Type H Stirling and Cross-Drum Boilers . . . Boiler Components . . . Pulverizers . . . Fuel Burning Equipment . . . Seamless & Welded Tubes for All Pressure and Mechanical Applications . . . Refractories . . . Process Equipment . . . Alloy Castings.

BABCOCK & WILCOX

New York Q. M. Paper Purchasing Activities

Army Invitations to Bid

QM-30-280-49-811—Pads (Various)—1,000,000 each. Bids will be opened 2 February 1949 at 3 PM (EST) at the New York office. Delivery: to be completed on or before April 30, 1949. This procurement is for the U. S. Army.

QM-30-280-49-680—Bags, Metal Foil (different sizes) 317,730 ea. Bags, Paper, Kraft—(4 different sizes) 253,00 ea. Board—corrugated, in double faced thick. 261,400 shts. Envelope—Paper, Greasepf. acid free, 116,500 ea. Paper, Tissue, White Wrapping 36" wide, 272 rolls. Paper, Wrapping Grsepf.—3 sizes, 3,367 rolls. Paper, Wrapping Kraft #2—2 sizes, 27,734 rolls. Paper, Wrapping Tissue No. 1 Manila 24 x 36", 617 rms. Bids will be opened 14 February 1949 at 1:30 PM (EST) at the New York office. Delivery: bidder to indicate earliest possible date. Procurement is for the U. S. Army (Air Corps.)

QM-30-280-49-831—Pads, Memorandum (Various)—30,000 each. Bids will be opened 7 Feb. 1949 at 1:00 PM (EST) at the New York office. Delivery: on or before June 30, 1949.

QM-30-280-49-834—Paper, Carbon T/W, Black (Various sizes)—193,500 bxs. Paper, Blotting, standard, etc.—600,00 shts. Bids will be opened 7 Feb. 1949 at 1:00 PM (EST) at the New York office. Delivery: to be completed during July 1949.

The above procurements are for the U. S. Army.

QM-30-280-49-905—Paper, Blotting, Carbon, Mimeograph, and Typewriter—Various quantities. Bids will be opened 14 Feb. 1949 at the New York office at 10 AM (EST). Delivery: to be completed by June 30, 1949. This procurement is for the U. S. Army (O.R.C.).

QM-30-280-49-841—Cups, Drinking, paper, flat bottom, round 2 pc. 4 oz.—1,360,000 ea. Cups, Drinking, paper, hot liquid—8,300,000 ea. Plates, Paper 9"—4,510,000 ea. Bids will be opened 9 Feb. 1949 at 2 PM (EST) at the New York office. Delivery: on or before 30 June 1949. Procurement is for the U. S. Army.

QM-30-280-49-863—Paper, Typewriter and Index—Various quantities. Bids will be opened 14 February 1949 at 3:30 PM (EST) at the New York office. Delivery: to be completed by June 1949. Procurement is for the U. S. Army.

Army Bids Received

Eight (8) bids have been received on the following item:

QM-30-280-49-661 covering Paper, Wrapping, Kraft #2 rolls—36"—30 lb. Quantity: 45,080—range price: from $.0779 to $.1275. This procurement is for the U. S. Army.

Forty-Two (42) bids have been received on:

QM-30-280-49-628 covering: Boards, Baling, Fiber, etc.—2,832,500 rolls from: $1.0608 to: $1.064. Paper, Corrugated—38,370 rolls from: $2.70 to: $10.45. Paper, Shredded Wax—399,000 lbs. from: $.0229 to: $8.43 cwt. Paper, Wrapping, Kraft—42,220 rolls from: $.0646 to: $.1293. Paper, Wrapping, Kraft WP creped—254,000 sets from: $61.00 to $180.55. Tape, Paper, Kraft, Gummed—43,740 rolls from: $.5800 to $.813. Wadding, Cellulose, Kraft backed (Various thicknesses)—5,000 rolls from: $1.93 to $18.82.

This procurement is for the U. S. Army.

Eleven (11) bids have been received on:

QM-30-280-49-690 covering Cups, Drinking, Paper, flat (100 to package)—3,416,000 pkgs; and Cups, Drinking, Paper, Flat bottom, bound 2 piece—63,330,000 ea. Price range from: $.00215 to $13 covering both items. This procurement is for the U. S. Army.

Army Awards Made

QM-30-280-49-496 covering various office supplies to:

Elam-Elkhart Stationery Co., Inc., Allegan, Mich.—(Pads, Memo) 41,250 ea. @ $.0475 to $.055. (Pads, Memo 6 x 9") 137,500 ea. @ $.0825 to $.10.

School Stationers Corp., Neenah, Wisc.—112,500 Pads—$.096 to $.0992.

Whitaker Paper Co., Baltimore, Md.—Paper, Blotting @ $.02525 to $.02727.

Butler Co., Chicago, Ill.—85,800 Papers, Blotting @ $.0233 to $.0234.

Old Town Ribbon & Carbon Co., Bklyn., N. Y.—18,750 boxes Carbon Paper @ $1.26 to $1.28 ea.

American Carbon Paper Mfg. Co., Ennis, Texas—290,000 boxes Carbon Paper—8 x 10½" @ $.544 to $.574. 60,000 boxes Carbon Paper—8 x 10½" @ $.642 to $.644.

Allied Carbon & Ribbon Mfg. Co., N.Y.C.—87,500 boxes Carbon Paper—8 x 10½" @ $.56 to $.565. 37,500 boxes Carbon Paper—8 x 13" @ $.66.

Allen & Co., N. Y. 7, N. Y.—327,500 boxes Carbon Paper—8 x 10½" @ $.55.

Stenno Ribbon & Carbon Mfg. Co., Portland, Ore.—45,000 boxes Paper, Carbon @ $.5794. 92,500 boxes Paper, Carbon—8 x 13" @ $.6494. 11,750 boxes Paper, Carbon—8½ x 17" @ $.90.

Enterprise Paper Co., Phila., Pa.—6,250 rolls Paper, computing machine @ $.0795.

Capitol Folding Paper Box Co., N.Y.C.—10,000 rolls Paper, computing machine @ $.076.

Central Paper Co., Menasha, Wisc.—45,150 rolls Paper, computing machine (various sizes) @ $.0835 to $.1252.

Standard Paper Corp., N.Y.C. 7, N.Y.—32,150 rolls Paper, computing machine (various sizes) @ $.1087 to $.1144.

QM-30-280-49-698 covering Paper, Toilet, 1000 sheets per roll, to:

Ashland Paper Mills, Inc., 220 E. 42nd St., N.Y.C.—2,700,000 rls. from: $.06007 to: $.06377.

Resolute Paper Prod. Corp., 250 W. 57th St., N.Y.C. 19—1,850,000 rls. from: $.0564 to: $.0574.

Hudson Pulp & Paper Corp., 200 E. 42nd St., N.Y.C. 17—450,000 rls. @ $.0698.

Navy Invitations to Bid

Inv. No. 4113—Paper, index, white—150,000 sheets. Bids will be opened 10 Feb. 1949 at the New York office. Delivery: 45 days to various destinations.

Inv. No. 4014—Envelopes, 4" x 5", waterproof—320,000 each (alternate bids to be considered). Bids will be opened 10 Feb. 1949 at the New York office. Delivery: March 1949 to various destinations.

CONVEYING PUBLIC SERVICE MESSAGES

The Gaylord Container Corp., uses three billboards like the one pictured, to convey public service messages in the vicinity of its Bogalusa, La., operations . . . "Use of the boards is to convey public service messages. As they are never used for advertising purposes, the company's name never appears. However, as our artist is extremely well known locally, everyone in the community is well aware that these billboards are furnished to the community by Gaylord," says Frank Hayward, Jr., of the firm's St. Louis offices. "The present message, pertaining to havoc wrought by forest fires, has received favorable local comment and we thought you might like to publish it in 'Paper Trade Journal.' Of course, the most effective feature of the fire message is provided by its vigorous color which is lost in black-and-white reproduction."

Inv. No. 3994—Boxes, Fiberboard, shipping—48,540. Bids will be opened 10 Feb. 1949 at the New York office. Delivery: March 1949 to various destinations.

Navy Awards Made

Inv. No. 3753—Paper, 135,300 reams—to:

Boston Paper Brand Co., Boston, Mass.—59,700 reams @ $.575 to $.87 per rm.

Walker-Goulard-Plehn Co., N.Y.C. — 67,600 reams @ $.6083 to $.95 per rm. (1%—10 days).

Stanford Paper Co., Washington, D. C.—8,000 reams @ $.64 to $.88 per rm.

Inv. No. 3829—Bristolboard—83,000 sheets—to:

Walker-Goulard-Plehn Co., Inc., N.Y.C.—83,000 sheets @ $.0285 to $.06 per sht.

Inv. No. 3706—Paper, various sizes and colors—184,800 sheets (approximately), to:

Walker-Goulard-Plehn Co., Inc., N.Y.C. at prices ranging from: $.0388 to $.123 per sheet (2%—10 days).

QM Purchasing Offices

WASHINGTON — Believing that the promotion of understanding between military and industrial leaders is vital to national security, Major General T. B. Larkin, the Quartermaster General, two years ago initiated various measures to accomplish that objective with regard to Quartermaster Corps operations.

One of these measures was authorization of publication by the New York Quartermaster Purchasing Office of *A Memorandum to Industry* to inform industry as to purchasing activities, inspections, deliveries and payment for supplies, and other currently important QMC operational and industrial mobilization matters.

The *Memorandum* now includes pertinent procurement information concerning all three Quartermaster Corps purchasing offices: The New York Quartermaster Purchasing Office, 111 East 16th street, New York 3, N. Y.; Chicago Quartermaster Purchasing Office (CQMPO), 1819 West Pershing road, Chicago 9, Ill.; and Western Branch of Chicago Quartermaster Purchasing Office (CQMPO-WB) located at the Oakland Army Base, Oakland 14, Calif.

Simplifying Army Business

NEW YORK—Since its opening in November 1947, the display room of the New York Quartermaster Purchasing Office, more familiarly known as NYQMPO, has proved a magnet to interested suppliers of Quartermaster Corps items.

Some 16,000 visitors—industrial and military—have studied the comprehensive exhibits being shown—and otherwise made good use of the facilities afforded to make it easier to do business with the U. S. Army.

Manufacturers and dealers from 41 states have availed themselves of this opportunity of learning more about needed QMC supplies and equipment. Brazil, Canada, England, Germany, Haiti, Hawaii, Italy, Mexico, Philippine Islands, Sweden, Switzerland, and Venezuela have been similarly represented.

New York QM Purchasing Office Recent Outstanding Awards

Item	Quantity	Unit	Awards	Award Price Range		
Bags, paper, 4 or 5 ply, flour or sugar	1,565,000	each	8	$.045	—	$.0525
Bags, paper	775,000	each	1	.0645	—	.....
Bags, burlap, 33 x 54	50,000	each	1	.5471	—	.....
Bags, paper, kraft	63,132,500	each	23	.002	—	.0175
Paper, stencil, duplicating machine, waxless	90,646	quire	2	.8875	—	.90
Paper, duplicator, mimeograph, typewriter	48,500	ream	8	.480	—	1.929
Paper, wrapping, Kraft	2,200,160	pound	1	.085	—	.....
Paper, recording, teletype, 8½", yellow	342,000	each	2	.6133	—	.7492
Paper, carbon, typewriter, various sizes	435,625	box	2	.563	—	2.208
Paper, map & chart, printing, fluorescent	1,000	ream	1	68.07	—	.....
Towels, paper	183,000	carton	5	2.63	—	7.11
Paper, toilet tissue	13,750,000	roll	3	.0685	—	.08
Napkins, paper embossed, various sizes	84,000,000	each	2	.0007	—	.0017
Containers, paper, ice-cream, 2½ gallon	920,000	each	1	.1052	—	.1084
Pads, paper, various types	1,948,500	each	4	.0139	—	.2645
Wadding cellulose	6,000	roll	1	12.10	—	.....
Folders, file, manila, various sizes	24,620,000	each	16	.0027	—	.0155

TO SACRAMENTO POST

Joseph H. Thiery has been named manager of Blake, Moffitt & Towne's Sacramento, Calif., division, succeeding J. H. Leatherman who resigned to enter business on his own account.

Corwin Resignation

BAINBRIDGE, N. Y.—John F. Corwin resigned from the Chemical Division (formerly Casein. Co. of America Division) of the Borden Co., effective January 31. He has been chemical director.

Eckert National Sales Dir.

NEW YORK—George W. Eckert has been named sales director of the National Paper Corp., of Pennsylvania.

AMERICAN PAPER AND PULP ASSOCIATION'S PRODUCTION RATIO REPORT*

(Production as per cent of six-day capacity)

COMPARATIVE WEEKLY SUMMARIES

Current Weeks—1949		Corresponding Weeks—1948	
December 18 '48	95.9	December 20 '47	107.2
December 25 '48	74.3	December 27 '47	74.9
January 1	73.3	January 3	100.3
January 8	94.5	January 10	99.4
January 15 (Revised)	94.8	January 17	99.9
January 22	**96.4	January 24	**101.1

** Capacity in Tons—177,680 ** Capacity in Tons—172,008

COMPARATIVE MONTHLY SUMMARIES

1947						1948	
Jan.	102.1	May	106.2	Oct.	109.5	Jan.	100.1
Feb.	105.9	June	106.2	Nov.	109.3	Feb.	99.8
Mar.	106.1	July	95.5	Dec.	101.5	Mar.	100.8
Apr.	105.1	Aug.	104.2			Apr.	100.8
		Sept.	102.0	Year Avg.	104.3	May	100.5
						June	95.7
						July	85.3
						Aug.	96.8
						Sept.	‡91.8
						Oct.	‡99.1
						Nov.	‡97.3
						Dec.	‡87.1
						Year Avg.	‡96.3

‡ Preliminary Ratios.

COMPARATIVE YEARLY SUMMARIES

	1942	1943	1944	1945	1946	1947	1948	1949
Year Average	90.4	87.8	88.1	89.4	101.1	104.3	96.3	

PAPERBOARD OPERATING RATIOS†

Current Weeks—1949		Corresponding Weeks—1948	
December 18 '48	96	December 20 '47	100
December 25 '48	87	December 27 '47	77
January 1	46	January 3	78
January 8	79	January 10	99
January 15	93	January 17	104
January 22	92	January 24	104

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1947	99	103	101	100	101	101	90	99	96	101	99	89	98
1948	99	100	102	102	100	94	81	92	91	96	94	84	95

* Based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

† Per cents of operation based on "Inch-Hours" reported to the National Paperboard Association.

Australian Notes

Total imports of newsprint into Australia during the month of September, 1948, were 3,603 tons (3,282 tons in rolls and 321 tons in sheets). This was a gain of 157 tons on the August figure, but a drop of 9,611 tons compared with the figure for September, 1947.

Imports of printing papers totalled 60,921 hundredweights (of 112 pounds), compared with the 38,171 hundredweights of August, and whereas the quantities received from the United States in the previous four months were 1,191 (May), 9 (June), 5 (July) and Nil (August), in September the number of hundredweights received from the U. S. was 3,809.

Details of the month's imports (all figures in hundredweights of 112 pounds) were: Antique, 866 (U. K. 661, Sweden 205); imitation art, 1,018 (U. K. 800, Sweden 218); machine process coated, 172 (U. K. 113, U.S.A. 59); other coated printings, 5,335 (U.S.A. 3,750, U. K. 1,585); monotype, 47 (all from U. K.); offset printing, 167 (all U. K.); lithographic, machine glazed, 1,536 (Sweden 805, U. K. 370, Finland 239, Norway 122); other machine glazed, 1,313 (Norway 1,007, U. K. 247, Sweden 59); esparto, one side calendered, 1,271 (all from U. K.); one-sided super calendered, 13,586 (Norway 8,293, Finland 3,374, U. K. 1,264, Sweden 558, Austria 97); two-sided super calendered, 758 (Sweden 699, Finland 59); machine finished, 405 (U. K. 314, Sweden 91); other printings containing 25 per cent or less mechanical pulp, 3,365 (Norway 2,200, U. K. 692, Czechoslovakia 236, Finland 215, Sweden 22); magazine and other printings containing more than 25 percent mechanical pulp, 30,034 (Finland 12,560, Norway 12,496, Sweden 3,301, U. K. 897, Netherlands, 780); and glazed imitation parchment, 1,048 (Finland 864, U. K. 99, Sweden 85).

* * *

R. A. Henderson, acting president of the Australian Newspaper Proprietors' Ass'n., addressing members at their recent annual conference, said: "Australian newspapers are about to operate with newsprint varying in price from £A62 a ton to £A85 a ton, and what this means will be realised when I tell you that just before the war we were paying £A12 a ton for what we are, at the moment, charged roughly £A45 a ton. We now have to find immediately a big increase in the cost of newsprint, varying from £A15 to £A35 or more, and in this direction alone we shall have to find increased costs of approximately £A2,000,000 (approximately $6,000,000) a year."

LOUISIANA JOINS KEEP GREEN PROGRAM

More than 1,200 of Louisianans assembled at Baton Rouge on January 6 to assist Governor Earl K. Long and Q. T. Hardtner, president of the Louisiana Forestry Association, inaugurate the "Keep Louisiana Green" program. Inman F. Eldridge, principal speaker said in part: "It would require no difficult or complicated action to double the annual volume of forest growth in Louisiana were it not for periodic uncontrolled wood fires. The pulp and paper mills and the larger sawmills must take the risk of these fires combatting them by heavy annual expenditures to put out blazes started by careless, ignorant or even criminal fellow-citizens. But thousands of small land-owners, who own 75 percent of the potential forest acreage, are helpless in the face of this constant threat . . . What is needed is an informed public opinion, which the Keep Louisiana Green movement is intended to foster." . . . The Louisiana Forestry Ass'n. is sponsoring the Keep Louisiana Green program, which is directed nationally by the American Forest Products Industries, Inc., Washington, D. C. . . . Among the members of the executive committee which will direct the campaign are: Paul M. Garrison, chief forester, Gaylord Container Corp., Bogalusa; Wilbur C. McDonald, Southern Advance Bag & Paper Co., Hodge; and B. A. Ryan, divisional manager, International Paper Co., Natchitoches . . . Left to right in picture are Mr. Eldredge; Gov. Long; Q. T. Hardtner, chairman of the executive committee; and C. G. Moore of the Southern Pine Ass'n., New Orleans.

Dealing with supplies of newsprint from other than dollar sources, Mr. Henderson said that the British Government had made available mechanical pulp sufficient to permit manufacture of 12,000 tons of standard newsprint. It had also approved an arrangement which had been made with the Bowater Corp., whereby they would manufacture from logs and sulphite bought by the Australian newspapers, 30,000 tons of newsprint. This will give a total of 42,000 tons, but as dollars will be required to secure the sulphite and logs, this will necessitate cancellation of North American tonnage amounting to about 12,000 tons. Thus there will be a net gain of 30,000 tons of paper.

In addition there will be available a certain amount of newsprint from Scandinavia and other parts of Europe, and in Mr. Henderson's opinion there will not be any great difficulty in obtaining between 60,000 and 70,000 tons of standard newsprint from these sources. Increased Tasmanian production will provide another 50,000 tons early in 1950, as against the current production of 30,000 tons.

* * *

The Australian Newsprint Mills has awarded a contract for mill machinery valued at about $100,000 to the Sumner Canadian Iron Works, and it is probable that the value of the contract will later be increased. The Canadian firm is already busy with a $350,000 contract for similar machinery for the Associated Pulp & Paper Mills, Burnie (Tasmania) Machinery includes log kickers, Simonson log turners, log stops, log loaders, Lueth skid lifts, electrically-operated log carriages, bandmills, lowering devices, etc. The use of this Canadian machinery is thought to have been brought about by the huge modernization and experimentation of Canada's newsprint manufacturers of late years. At the same time the Dominion Engineering Co., Montreal, will be building a second paper machine for A.N.P.

* * *

Australian Paper Mills Ltd., has made an arrangement with New Zealand Forest Products for a 20-year supply of pulp, quantity to be supplied annually being 12,500 tons. Experts say that the time may come when paper mills in New Zealand will supply the whole of the Dominion's needs and a certain amount for export, but as one industrialist says: "The incompetence of bureaucracy may stagger along for some while yet."

* * *

The Whakatane Board Mills, Ltd., reports that last year's increase in production was due to full supplies of coal being received, an absence of labor disputes, and the introduction of an incentive production bonus scheme involving 220 employes who divided the sum of £14,493. During the year additions were made to the plant.

Obituary

Albert F. (Bert) Knapp, 49, owner of the Riverside Paper Stock Co., Buffalo, N. Y., died on January 16 at the Linwood Convalescent Home after an illness of nearly two months. He is survived by his widow, the former Marion Kritz; a son, Robert C. Knapp; a daughter, Mrs. Jack Pilkey; two sisters, Mrs. Edith Eppright and Mrs. Helen McNaught, and a brother, Adelbert E. Knapp.

William Joseph Bell, 48, of Scarsdale, N. Y., paper manufacturers' representative to wholesalers of office stationery in New York City for 25 years, died on January 26 at New York Hospital. Surviving are his widow, Mrs. Ethel Whittemore Bell; three daughters, the Misses Barbara, Peggy and Patsy Bell; a sister, Mrs. Mary Bresnan, and a brother, Thomas B. Bell.

Henry E. Richards, 100, retired papermaker and the oldest alumnus of Massachusetts Institute of Technology and believed to be the oldest Harvard alumnus (Class of 1869), died at his home in Gardiner, Maine, on January 26. Mr. Richards, years ago, was the operator of the Richards Paper Co., at Gardiner, and of a pulp mill at South Gardiner.

Angelo Gaccione, 80, waste paper trade pioneer, died at the home of one of his sons, Joseph P. Gaccione, Brooklyn, N.Y., on January 28. Surviving him are four sons, Joseph P. and John B. of Gaccione Bros. & Co., Inc.; Anthony S. of the Toga Paper Stock Co., Inc., and James V.; also a daughter, Mrs. Rose Junker.

Wesley Boy Barnard, 79, former president of the Barnard Paper Co., Ottawa, Canada, passed away at his home on January 25 following a lingering illness. He retired from the presidency of the Barnard company in 1939. Surviving are his widow, two brothers and a sister.

John Clark Rice, 72, Boston lawyer and a director of the St. Croix Paper Co., and other corporations, died at his home in that city on January 27, following a brief illness.

Mensures Moisture

CHICAGO—A new electronic instrument, which can measure continually the amount of moisture in moving sheets of materials such as paper and textiles has been developed at the Armour Research Foundation of the Illinois Institute of Technology. The device also can be used to monitor the percentage of volatile materials in sheet plastics.

Materials to be checked are fed between two metal plates, and a dial on the instrument's control panel registers the moisture or volatile material in terms of percentage. The instrument operates on the principle that moisture in sheet materials makes them better conductors of electricity so their conductivity can be used to measure how much moisture they contain.

Machinery, $11,000,000

GLENS FALLS, N. Y.—More than $11,000,000 worth of pulp and paper making machinery has been built and shipped from the Sandy Hill Iron & Brass Works, Hudson Falls, N. Y., since the closing of its war program. This was revealed by Frank A. Juckett, company president, at the annual banquet of the firm held in the Queensbury Hotel here on January 22.

At the banquet, Francis W. Lavoy, an officer of the William Vieley Chapter, of the Disabled American Veterans, was introduced by J. Walter Juckett, secretary and assistant treasurer of the company. Mr. Lavoy told the group the reasons behind the recent decision of his chapter to vote the National Disabled Veterans Citation to the Sandy Hill Iron and Brass Works. Mr. Lavoy stated that the Sandy Hill firm was accorded this honor because of its efforts in behalf of the returning veterans.

In basketball, as in papermaking, competent action at critical moments wins out. Team work pays off. Experience counts — and never more than in making the sort of felts your team needs.

The DRAPER felt

DRAPER BROTHERS COMPANY

Woolen Manufacturers Since 1856

CANTON, MASSACHUSETTS

RALPH E. BRIGGS, *Sales Manager*

● BRADFORD WEST, *Pittsfield, Mass.* ● WILLIAM N. CONNOR, *Jr., Canton, Mass.* ● L. H. BREYFOGLE, *Kalamazoo, Mich.* ● ● WALTER A. SALMONSON, *2514 Northeast 59th Ave., Portland, Oregon* ● L. L. GRIFFITHS, *Jr., Kalamazoo, Mich.* ●

Forest Management License

VANCOUVER, B. C.—Canadian Western Timber Co. is expected to receive the second forest management license issued under the new British Columbia system for sustained forest yield. Last year the B. C. cabinet agreed to grant the license to the company which is planning a big pulp mill at Duncan Bay on the west coast of Vancouver Island at Campbell River.

Details of the management contract have taken months to work out and it will go into operation only when the final papers are signed.

It is expected that after this legal step, the company will get its plans for the pulp mill under way. The only other management contract so far completed is that to the Celanese Corp., now constructing a cellulose plant at Port Edwards, near Prince Rupert, B. C.

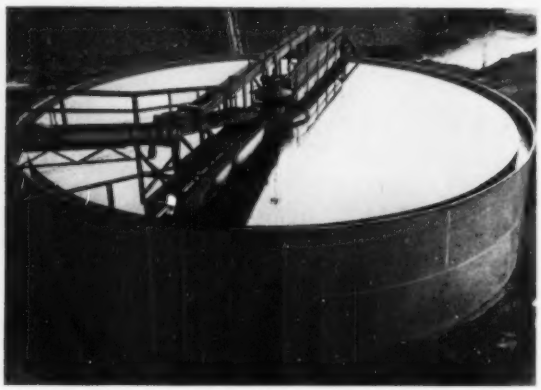
More than 100 other applications for management licenses are in process of negotiation.

Canadian Western's license covers some 70,000 acres of timber lands along the eastern coast of Vancouver Island and islands in the Johnston Strait. It is designed to supplement timber holdings the company already has in the area to produce a crop that will keep the pulp mill going indefinitely.

HARDINGE CIRCULAR CLARIFIERS

⬇ for Paper Plant ⬇

WATER SUPPLY - - - "WHITE WATER"



Hardinge Steel-Tank Clarifier Reclaiming Waste Water

Hardinge Clarifiers have proven useful in paper plants for removal of settleable solids and in recovering fiber and filler from white water, leaving it sufficiently clear to be reused in the process. It may also be used for clarifying the plant water supply.

In localities where water rates are high, your own water supply or waste water treating system can save you money.

Available with either steel or concrete tanks, Hardinge Circular Clarifiers are usually equipped with cut-flight scrapers which remove settled solids rapidly through a central discharge. Can be used in conjunction with chemical treatment and flocculation.

State your water treatment problem and write for Bulletin 35-C-14.

HARDINGE

COMPANY INCORPORATED

YORK, PENNSYLVANIA — 240 Arch St. • Main Office and Works
NEW YORK 17—122 E. 42nd St. • 205 W. Wacker Drive—CHICAGO 6
SAN FRANCISCO 11—24 California St. • 200 Bay St.—TORONTO 1

Quashes Rail Merger Plan

JACKSONVILLE, Fla.—Federal Judge Samuel H. Sibley ruled on January 24 against a proposed merger of the bankrupt Florida East Coast Railroad with the Atlantic Coast Line. He returned the merger plan to the Interstate Commerce Commission.

The ruling is a victory of the du Pont-owned St. Joe Paper Co. which owns a majority of $45,000,000 FEC first and refunding bonds. The paper concern is also seeking control of the line, which has been under reorganization since 1931.

Judge Sibley also denied a petition by S. A. Lynch interests of Miami, owner of a block of FEC bonds, that $12,000,000 first mortgage bonds against the road be paid off. Payment of these bonds before their due date can be done only in conjunction with a plan of reorganization, he ruled.

Perfect Safety Record

CARTHAGE, N. Y.—Approximately 40 members of the spiral tape, steam and electric and repair departments of the Herring mill, Taggart Corp. were honored at a banquet Jan. 25, at Johnnie's Inn, in recognition of a perfect safety record for 1948. Arrangements for the dinner were made by H. R. Eager of the Herring mill and J. P. Redmond of the Deferiet branch. Among honor guests were W. R. Adams, vice-president of the St. Regis Corp., and C. C. Wenzel, personnel manager of the company.

Letters

Dear Earl:

The "Condensation of Round Table Discussion on Pulp Bleaching," published in the PAPER TRADE JOURNAL, December 9, first paragraph, page 25, misquotes or misprints a statement made by me at the Atlanta Meeting. Will you kindly publish the correction which reads as follows:

"Although the hypochlorite potential starts at a higher level; say in the order of one volt or more, the curve drops down where at a pH of eleven you have approximately the same oxidation potential as with sodium chlorite at a pH of seven. Consequently, we have adjusted the pH values in the hypochlorite stages to a pH of eleven, and find that the cuprammonium viscosity can be retained at approximately the same level as with pulp bleached with chlorine dioxide at pH seven or sodium chlorite at pH seven or higher."

We have had several inquiries about this statement of seven-seven instead of seven-eleven. The published correction will help clarify the issue.

JOHN SCHUBER
Technical Service
Solvay Process Division
Allied Chemical & Dye Corp.
Syracuse 1, N. Y.

The material referred to was condensed from a stenotype transcript of several extemporaneous speakers' remarks. In spite of every precaution, errors occasionally creep into manuscripts of this nature.

WILLIAMS PRECISION FREENESS TESTER

The Most Accurate Freeness Tester Ever Built

Operates on the Only Correct Principle of Freeness Testing.
Automatic Timing with Electric Stop Clock which Measures Drainage Rate through a Wire, same as on Paper Machine.

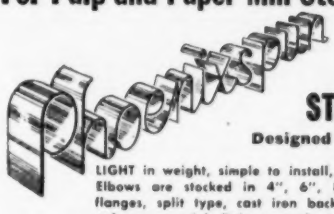
For 25 years we have developed and manufactured Pulp and Paper Testing Equipment

- Pulp Testing Ovens
- Sheet Moulds
- Laboratory Presses
- Sheet Dryers
- Wood Chip Classifiers
- Pebble Mills
- A.S.T.M. Penetration Testers
- Electric Centrifuges
- Paper Moisture Testers
- Smoothness Testers
- Laminating and Plastic Moulding Presses

WILLIAMS APPARATUS CO., Inc.

19 Park Place — Watertown, N. Y.

For Pulp and Paper Mill Stock and White Water Lines



Smoothflow

STAINLESS STEEL ELBOWS

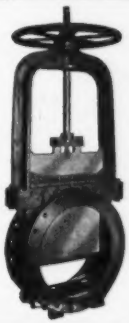
Designed for Stainless Steel and Transite Pipe

LIGHT in weight, simple to install, with smooth inside curvatures, SMOOTHFLOW Elbows are stocked in 4", 6", 8", 10" and 12" sizes. Standard vanstone flanges, split type, cast iron back-up flanges with standard bolt holes. Tees, reducers, special fittings, made to special order.

WRITE for illustrated folder and dimension data.

PHOENIX PRODUCTS CO., *Metal Spinning Division*

4721 N. 27th STREET — MILWAUKEE 9, WISCONSIN



RECORD PAPER & PULP STOCK VALVES "BONNETLESS SELF CLEARING" – – – "RESIDUE POCKETLESS TYPE"

METALS — I.B.B.M., all iron, bronze or stainless steels, body parts plain or rubber lined.

The photo of 24" Fig. 241 I. B. B. M. valve while illustrating the gate bottom wedge system for forced gate seating and "GUILLOTINE" edge for shearing fibre at seat also shows the packing box and yoke as separate units. Both adjustable.

- The **"FAST THREADED"** screw stem and ball bearing speeds valve operation.
- The packing box is extra deep, is adjustable and provided with specialized lubricated packings and special type gland and compression bolts.
- The yoke mountings are such that yokes for various methods of gate operation are interchangeable.
- Replaceable gate edge shoes are used in valves 10" and larger. These shoes are of special value when valves are installed stem and pipe horizontal.

"RECORD PRODUCTS EXTENSIVELY USED IN DEFENSE PROJECTS."

RECORD FOUNDRY & MACHINE COMPANY

LIVERMORE FALLS, MAINE, U. S. A.

Supplying Your Requirements

AMERICA'S LEADING INDEPENDENT WASTE PAPER PACKERS

WASHINGTON, D. C.
PHILADELPHIA, PA.
NEW YORK, N. Y.

THOMAS PAPER STOCK COMPANY

860 W. Evergreen Avenue • Chicago 22, Ill.

CLEARING HOUSE

HELP WANTED

HELP WANTED

WANTED

West Coast sulphate pulp and paper mill has splendid opportunity for combination mechanical engineer-draftsman. High starting salary. Write giving full particulars as to age, experience, etc., to:

St. Helens Pulp & Paper Co.

St. Helens, Oregon

TF

Technical Sales Position
PAPER CLAY

Young man, preferably technical graduate with actual production experience in papermill, wanted for sales and technical service position involving both filler and coating clay. Replies confidential. Please give details.

Industrial Products Division

J. M. Huber Corporation
342 Madison Avenue
New York 17, New York

F-10

WANTED
CHIEF ENGINEER

to take complete charge of Fox River Valley (Wisconsin) Paper Mill Power Plant, supervising the operation and maintenance of high pressure boilers, turbines and auxiliary equipment. Man with technical and practical background preferred. Excellent opportunity to use initiative and supervisory ability.
Give complete personal and business history on letter of application. All replies held confidential.
Address Box 49-66 care Paper Trade Journal.

F-24

OPPORTUNITY!
CARTON MACHINERY ENGINEER

Man experienced in designing, developing and installing changes and improvements in carton making machinery. This includes printing presses and automatic glueing machines. Must be an excellent mechanic and have mechanical engineering training and be experienced in the carton industry on carton machinery.

Modern progressive company in Middle West desires services of outstanding man with imagination and ability. Correspondence will be treated confidentially; write and send photo, if possible, to address Box 49-49—Paper Trade Journal.

F-3

HELP WANTED

MEN WANTED
Positions Open

General manager Fourdrinier machine mill making rag and better grade sulphite papers; general superintendent Fourdrinier machine paper mill; superintendent rag and sulphite papers.

Man for development of paper products and paper specialties; color chemist coating plant $5,000-7,000; coating foreman; paper salesmen, New England and Northeastern territories.

Cylinder, Fourdrinier and Harper back tenders and machine tenders; plant engineers, assistant plant engineers and master mechanics.

Operating comptroller; internal auditor; industrial engineer; personnel department assistant.

Engineering draftsman with engineering degree and at least five years pulp and paper engineering experience, salary $365-500 month.

We invite correspondence (confidential) with mills seeking executives and with executives seeking new positions.

CHARLES P. RAYMOND SERVICE, INC.
294 Washington St., Boston 8, Mass.

F-3

Thoroughly experienced converting men on facial tissue, N.Y.C. vicinity. Toilet, napkins, boxed goods, most modern equipment. Must be able to maintain machinery in highly productive condition and train employees to operate efficiently. A most excellent opportunity for a man who knows his business and wants to work at it with an eye to the future. Non-union shop. Give your complete history with reply. A thoroughly competent, energetic producer need not worry about his compensation. Box 48-818, care Paper Trade Journal.

F-3

WANTED
PAPER RESEARCH CHEMIST

to supervise group of 6 to 8 men on development of paper products in research laboratory of upper midwest manufacturer of bleached groundwood, sulphite and kraft printing and converting papers. Must be well grounded in paper chemistry and manufacturing processes with development experience in these fields. Prefer man 30 to 40 years old with a good knowledge of book grade bleached papers and enamel grade coated papers. In reply give personal history, training, experience and salary expected.

Address Box 49-52, care Paper Trade Journal.

TF

PRESSMAN—Experienced on rotary multi-color presses, coffee bag experience preferred but not essential, excellent opportunity for person with right qualifications, state full details. AMERICAN BAG AND PAPER CORP., Water & South Sts., Philadelphia, Pa.

F-10

RATES FOR CLASSIFIED ADVERTISING

HELP WANTED—10c a word. Double rate for heavy face type. Minimum charge $2.50.

SITUATIONS WANTED—10c a word, double rate for heavy face type. Minimum charge $2.50. If repeated ½ rate will be charged for each consecutive repetition.

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OPPORTUNITIES—10c a word. Double rate for heavy face type. Minimum charge $2.50.

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Address replies to advertisements appearing under Box Numbers in care of PAPER TRADE JOURNAL, 15 West 47th Street, New York 19, N. Y.

Only the Fastest Win, Place or Show.....

TRANSFER the thought to industry, and the same rule holds.

There is, in papermaking as in other lines, the management that's content to trot along – satisfied with present equipment – satisfied with the quality of the paper or board being produced.

On the other hand, there are managements eternally grooming for first place – seeking ways to improve – adopt new techniques – replace obsolete equipment with the new – test for ways to step up quality – cut conversion costs at every turn.

Needless to say, it is the latter group who win the race where competition unhorses the seller.

"EVERYTHING FOR THE PAPER MILL"
Large, medium, or small

Black-Clawson
HAMILTON, OHIO

Divisions: SHARTLE BROS. MACHINE CO., MIDDLETOWN, OHIO
DILTS MACHINE WORKS, FULTON, NEW YORK

Western Sales Office: R. T. Petrie, Mayer Bldg., Portland, Ore.

Associate: Alexander Fleck Limited, Ottawa, Ontario, Canada

HELP WANTED

SALARIED POSITIONS $3,500—$25,000

If you are considering a new connection communicate with the undersigned. We offer the original personal employment service (39 years recognized standing and reputation). The procedure, of highest ethical standards, is individualized to your personal requirements and develops overtures without initiative on your part. Your identity covered and present position protected. Send only name and address for details.

R. W. BIXBY, INC.
117 Dun Bldg., Buffalo 2, N. Y.

TF

WANTED — Machine Tender and Back Tender for straight Fourdrinier running High Grade Tissues. Flower City Tissue Mills Co., Rochester, 12, N. Y. M-3

HELP WANTED

SUPERINTENDENT—New England high grade specialty cylinder machine mill. Practical paper maker wanted who can train and supervise without sacrifice of production and quality. Write in full detail giving age, experience and salary expected. Address Box 49-47 care Paper Trade Journal. F-10

ESTIMATOR—Paper bags or paper experience—excellent opportunities. Give full details. Address Box 49-63 care Paper Trade Journal. F-3

SITUATIONS WANTED

PAPER CHEMIST—Two years experience in converting industry. Pulp and Paper Graduate '46 of New York College of Forestry. Interested in development, control, technical sales. Tappi Member. Address Box 49-50 care Paper Trade Journal. F-3

SITUATIONS WANTED

TO THE BUSY EXECUTIVE OR OWNER—Can you use a man you can literally trust with your life? Experienced in paper converting field, broad knowledge, mature judgment, good appearance. Write with complete confidence to Box 49-44 care Paper Trade Journal. F-10

PAPER BAG SPECIALTIES and Envelopes. Top flight mechanic, versatile, resourceful, good education, desires supervisory or heavy responsibilities. Address Box 49-45 care Paper Trade Journal. F-10

PLANT ENGINEER—Age 35—15 years experience in the paper machine industry—experienced in designing, manufacturing, erection and maintenance of paper mill equipment—can furnish best of references. Address Box 49-51 care Paper Trade Journal. F-3

MAN CAPABLE OF BUILDING a specialty bag or envelope plant, from the ground up, desires connection with domestic or foreign concern. Address Box 49-43 care Paper Trade Journal. F-10

FOR SALE

BARKERS

1—5' Carthage Disc Barker.

BEATERS

3—1000 lb. Dilts Beaters—Iron Tub.
1—800 lb. Beater—iron tub.

BRASS FELT ROLLS

9—4" diameter x 140" face (with bearings).

BREAST ROLLS

1—100" x 14".
1—114" x 14".
1—120" x 14".

CALENDER STACK

1—72" 5 roll Calendar Stack.

CRUSHERS

1—18" x 18" Jeffrey Single Roll Crusher.

CYLINDER MOULDS

1—36" diameter x 80" face.
1—30" diameter x 72" face.
1—36" diameter x 79" face.
1—42" diameter x 88" face.

DECKER

1—Decker—48" diameter x 84" cylinder mold (New).

DRIVES

2—#4 Reeves Drives.
1—#2 Reeves Drive.
1—Smith & Winchester mortise gear Drive.
1—D. O. James 75 H.P. Speed Reducer with couplings and motor base. Ratio 2:16 to 1. 900 RPM.
1—Foote—7½ h.p. Speed Reducer (Ratio 240 to 1)
2—Smith & Winchester Mortise Gear Drives with 26" diameter clutches—Ratio 8 to 1.

DRIVES (Angle)

1—General Machine Company 16 : 1.
1—Philadelphia 50:1 — 1 h.p. — 1200 r.p.m.
2—Philadelphia 21¼:1 — 3 h.p. — 1200 r.p.m.

V-BELT DRIVE

1—8155" diameter x 7½" face, 5 groove.
1—16½" diameter x 7⅞" face, 5 groove. (With clutch).

DRYERS

9—36" diameter x 76" face.
1—48" diameter x 91" face.
1—48" diameter x 94" face.
8—25" x 120"(Baby Dryers).
2—96" x 142".
1—24" x 130".

FLAT SCREENS

2—12 Plate Murray Dunbar Flat Screens.
1—8 plate Packer Type Flat Screen.
1—6 plate Shartle Flat Screen.

HYDRAULIC PRESS

1—Watson-Stillman Co. (Platen 24" x 24").

JORDANS

1—Noble & Wood, Pony Monarch, Belt Driven.
2—Noble and Wood—Mammoth Type.

MISCELLANEOUS

1—Caustic Mixer.

MOTORS

2—5 h.p. ball bearing—splash proof motors—3/60/440, 1160 r.p.m.
1—½ h.p. ball bearing—splash proof gearhead motor—3/60/440, 1725 r.p.m.
1—2 h.p. ball bearing—splash proof gearhead motor—3/60/440, 1725 r.p.m.

PRESS ROLLS

Various sizes.

PULLEYS

Various cone and assorted pulleys.

PULP STACKER

1—Link Belt Company Pulp Stacker, 30 ft. conveyor, 2½ ft. wide, self propelled, with motors.

PULPER

1—Jones Pulper. Complete with motor and drive.

PUMPS

2—Weil Pump Co.—100 g.p.m.—100 P.S.I. including 15 h.p. motors (new equipment).
1—Bell & Gossett—300 g.p.m.—120' head—including 15 h.p. motor.
1—Goulds Sump Pump—50 g.p.m.—20' head—including motor.
Various sizes of Centrifugal and Plunger Pumps. Write us regarding your particular requirements.

REEL

1—72" Beloit Reel.

ROLLS

500—Brass tube-steel tube—rubber covered iron rolls—various sizes.

SAVEALL

1—#5 Bird Saveall.

SCREEN PLATES

20 Plates cut .016.
10 Plates cut .008.
Also other sizes and cuts in stock.

SHEETER

1—136" Moore & White Sheeter, duplex, with layboy.

SLITTERS AND WINDERS

1—62" Cameron—Type 10-10-AJ.
1—42" Cameron—Type 28-8-7 (shear cut).
1—72" Cameron—Type 28-8-7-D (shear cut).
1—42" Cameron—Type 40-4-B.
1—42" Cameron—Type 24-2A.
1—30" Cameron—Type 24-2L.
1—42" Cameron—Type 9-5.
1—56" Cameron—Type 24-2A.
1—30" Langston.
1—42" Cameron Constant Tension — pneumatic control.

SQUEEZE ROLLS

2—Rubber Squeeze Rolls, 20¾" diameter x 102" face.

STOCK PUMPS

1—10 x 20 Shartle Duplex.
4—7 x 16 Shartle Duplex.
Numerous other Centrifugal Stock Pumps. Advise as to your requirements.

SUCTION COUCH ROLLS

1—Sandusky 14⅛" diameter x 103" drilled face.
1—Sandusky 22" diameter x 119" drilled face.

SUCTION PRESS ROLLS

1—Downingtown Suction Press Roll 16" diameter x 66" drilled face.

TRIMMER

1—56" Smith & Winchester—Undercut.

TURBINE

1—150 h.p. Westinghouse Type C-Gear Turbine (Recently rebuilt).

VACUUM PUMPS

1—#4 Nash Hytor Vacuum Pump.
1—Sandusky 8 x 10.

WAXING MACHINE

1—62" Mayer Waxing Machine.

YANKEE DRYERS

2—8' diameter x 175" face.

We are always in the market to purchase your surplus or idle machinery. What have you to offer? Wanted Cylinder and Fourdrinier Machines (complete mills).

Paddy Ross, Pres. **J. J. ROSS COMPANY** **Ben Kurs, Treas.**

250 Frelinghuysen Ave. **Tel.—Bigelow 3-3720** **Newark 5, N. J.**

TELEPHONE
HUMBOLDT 2-2177

CABLE ADDRESS: JACKROSS

ROSS PAPER MACHINERY CO.

265 PASSAIC STREET
NEWARK 4, N. J.

CONVERTING
PAPER MAKING EQUIPMENT

NEW, USED, REBUILT
PAPER AND PULP MACHINERY

1—Pusey & Jones 120" Fourdrinier Paper Machine, complete with enclosed drives, ball bearing wet end with suction press and suction couch, 60" diameter dryers, 3 calender stacks and winders.
1—Pusey & Jones 82" Fourdrinier Machine Complete.

BEATERS

9—750 lb. Horse Iron Tub. Roll 60"x40"
2—Valley Iron 750 lb. Iron Tub—Bronze filled.
1—Downingtown 2000 lb. Beater Roll—60" x 60" —with perforated back fall. Iron tub.
1—E.D. Jones 2000 lb. Beater Roll—67" x 90". Iron tub and bottom.

BLOWERS

1—American Sirocco Size 4.
3—American Blowers #300
1—American Blower #700.
1—American Blower #750
3—Buffalo Forge Co. #24 Cast Iron Blowers

CALENDER ROLLS

6—116" face x 9½" diameter.
4—104" face x 9½" diameter.
3—104" face x 12½" diameter
32 Rolls—various sizes.

CALENDER STACKS

1—104" face 5 roll stack, with drive
1—76" face 7 roll with drive.
1—76" face 3 roll with drive.
1—112" face 7 roll.

CONVEYOR

1—18½ ft long x 30" wide—with motor.

COUCH ROLLS—BRASS

1—104" face x 18" dia.
1—138" face x 18" dia.
1—150" face x 18" dia.
1—62" face x 19½" diameter.
2—94" face x 21¾" diameter.

COUCH ROLLS—RUBBER

1—110" face x 20" dia.—New
1—139" face x 19" dia.
1—141" face x 21" dia.

CYLINDER MOLDS

2—IMPCO 49" diameter x 94" face.
2—38" diameter x 138" face Cylinder molds with vats, couches—ball bearing.
2—74" face x 36" diameter.
1—134" face x 36" diameter, with stainless steel shafts.
1—78" face x 36" diameter.

CYLINDERS AND VATS

2—138" face x 36" dia.—with vats, couch, complete.

DRIVES

1—SC. Reeves Drive.
1—New Reeves 4343—C-10 with 2 h.p. 220-440 volt G.E. Motor.

DRYERS

4—74" face x 28" diameter with gears.
5—143" face x 48" diameter.
6—124" face x 48" diameter.
6—98" face x 36" diameter.
1—77" face x 48" diameter—with gear.
1—94" face x 36" diameter.
18—78" face x 36" diameter, complete with 2 dock frames, gears, bearings and steam joints. Drives, line shaft and felt rolls are available.
1—78" face x 18" diameter with gears and bearings.
2—48" face x 24" diameter—chromium plated.
1—120" face x 18" diameter—Baby Dryer.
34—128" face x 48" diameter.
11—64½" face—36" diameter with 2 dock frames, gears and bearings.
3—63¼" face—36" diameter—bearings and gears.
2—62¼" face—36" diameter—bearings and gears.

EXTRACTOR ROLLS

1—Downingtown—44" face x 17" diameter

FLAT SCREENS

5—10 plate Sandy Hill.
1—Sandy Hill 8 plate—with scraper.
1—New Sandy Hill 12 plate, with scrapers and V-belt drive.
1—Montague 6 plate—ball bearing.

FOURDRINIER SECTIONS

1—P & J 158" x 80 ft. ball bearing. Complete from inlet to 22" diameter suction couch. Brass and Rubber covered table rolls. 8 Brass Suction Boxes operated at 1000' per minute.
1—M & W 82" x 40' complete with 3 suction boxes, shake, 5 section presses and size press.

HAMMERMILLS

1—American Hammermill—87" ball friction bearing enclosed.

HEAD BOXES

1—118" Bronze Lead Lined. Gooch.

INLETS

1—Voith inlet for 181" wire with 28" slice. Complete, including drive.

JORDANS

1—Jones Standard—ball bearing direct connected to 150 h.p. G.E. 440 volt motor.
1—23 Miami, for motor drive.
1—Jones Standard for V-Belt Drive.
1—Jones Majestic, roller bearing—stainless steel filling—for motor drive.
4—Jones Majestics with base and couplings—bronze filled, 2 sets of new bronze fillings.
2—23 Appletons with base and coupling—bronze filled.
1—Dillon Horse 23—direct connected 75 h.p. Stainless steel ¼" filling.
1—24 Smith & Winchester—Ball bearing.

LABORATORY EQUIPMENT

1—12" 8 roll calender stack with Westinghouse 7½ h.p. motor.
1—New E. D. Jones 17# iron tub beaters, stainless steel fillings.

MOTORS

1—Fairbanks Morse—30 h.p. — 495 r.p.m. — 220-440/550.
1—Reliance 25 h.p. ball bearing, 550 v., 3 phase, 60 cycle—1750 r.p.m.
1—Reliance 25 h. p., ball bearing, 440 v., 3 phase, 60 cyc., 1760 r.p.m.
1—General Electric 100 h.p.—440 v.—3 phase—60 cycle—600 r.p.m.

PRESS ROLLS

1—110" face x 13" diameter—rubber.
1—101" face x 18½" diameter—rubber.
1—123½" face x 12½" diameter—rubber.
1—112" face x 15" diameter—rubber.
1—122" face x 17½" diameter—brass.
1—117" face x 24" dia.—Brass.
1—94" face x 20" dia.—Rubber.
1—110" face x 22" dia.—Rubber.
2—118" face x 21" dia.—Rubber.
3—147" face x 11¾" dia.—Rubber.
1—74" face x 18" diameter—Rubber.
1—109" face x 17" diameter—Rubber.
1—130" face x 22" diameter—Brass.
1—102" face x 16" diameter—Rubber.
1—119" face x 17" diameter—Brass.
1—76" face x 19" diameter—Brass.
1—53" face x 14" diameter—Brass.
1—53" face x 12" diameter—Iron.
1—55" face x 19" diameter—Iron.
1—74" face x 16" diameter—Iron.
1—73" face x 14" diameter—Iron.
1—102" face x 18" diameter—Brass.

PULP EQUIPMENT

1—Jigger—1 deck—vibrating screen.
1—Mills & Morrill 217 Pulpwood chipper.
1—9" Carthage Disc Barker
1—88" Carthage Ball Bearing Chipper—4 knife
2—New Stedman Disintegrators—50".

PULPERS

1—Bird Pulper
2—22 Lamoyo Pulpers.

PUMPS

1—Worthington Monoblock—250 g.p.m.—130' head—direct connected to 15 h.p.—3500 r.p.m.—220/440 volts, totally enclosed, ball bearing motor.
1—Ingersoll Rand—50 g.p.m.—210' head—direct connected 7½ h.p.—220-440 volt—3 phase—60 cycle totally enclosed motor.
1—New Warren—all bronze, 30 g.p.m.—69' head —connected to 1½ h.p.—440 volt motor.
1—Ingersoll Rand 150 g.p.m.—250' head—connected to 5 h.p. motor—220/440 volt motor.
1—Worthington—2000 g.p.m.—250' head.
1—Worthington 3 x 4—300 g.p.m. 75' head—1750 r.p.m. Ball bearing for motor drive.
1—Tromb Marine ball bearing, 600 g.p.m.—600' head.
3—6" x 8" B & C Open Impeller Bronze Pumps —belt drive.

PUMPS—OPEN IMPELLER

1—Morris open impeller—9" suction—9" discharge —belt drives.
1—Morris Vertical Open impeller 8 x 6—300 g.p.m. 3 percent stock—80' head—connected to G.E. 15 h. p. 220-440 volt 3 phase—60 cycle—1165 r.p.m.

1—New Gould—ball bearing—9" suction—4" discharge—700 g.p.m.—60' head. Requires 20 h.p. at 1750 r.p.m.
1—New Gould—ball bearing—8" suction—6" discharge—1000 g.p.m.—42' head. Requires 25 h.p. at 1150 r.p.m.
2—New Gould—ball bearing—6" suction x 4" discharge—600g.p.m.—60' head. Requires 15 h.p. at 1750 r.p.m.
1—New Gould—ball bearing—8" suction—6" discharge—1200 g.p.m.—60' head. Requires 30 h.p. at 1150 r.p.m.
1—New Gould—ball bearing—8" suction—6" discharge—1000 g.p.m. 40' head. Requires 20 h.p. at 1150 r.p.m.

REELS

2—Beloit 110" two bowl Reel.
1—M & W 76" 2 bowl reel.

ROTARY KNIFE CUTTERS

3—Sprout Waldron Cutters Type F-11. 30" knives—used 30 days.

ROLLS

200 Assorted felt carrying.
10—Brass Chromium Plated. Ball Bearing. 60" Base x 12" Diameter.
1—Brass 128" face x 11" diameter.
1—Brass 140" face x 12" diameter.
1—Brass 130" face x 12" diameter.
1—Brass 120" face x 19" diameter—ball bearings.

ROTARY SCREENS

3—Jones Lathwalk—cylinder 94" face x 28" diameter.
1—23A Bird Rotary—copper vats—with motor —used less than 1 year.

SCREW PRESSES

3—Valley Voith Screw Presses Size 2A, with new spare sets of plates.

SHEETERS

1—Hamblet 130" heavy duty—with 12 roll back stand and layboy.
3—Hamblet 81" Single Knife with 6 roll back stands and motors.
1—Hamblet 81" Single Knife with 6 roll back stand and motor.
1—Hamblet 100" duplex with 4 pile Erie Layboy.

SHREDDERS

3—Sprout Waldron Cutters—type F-11—30" knives. Used 30 days.

SLITTERS AND WINDERS

1—40" Kidder Slitter and Rewinder.
2—Pusey & Jones 100" high speed slitters and rewinders.
1—Cameron 52" type 8 Model 5A with friction tension.
1—Cameron 56" Model 6.
1—Cameron 60"—Model 6.

STUFF PUMPS

1—Beloit 10 x 20 triplex—with motors and chain drives
1—Shartle 7 x 10 Triplex.

SUCTION COUCH ROLLS

1—Millspaugh 22" diameter x 139¾" suction face.
1—Millspaugh 22" diameter x 158" drilled face.

SUPER CALENDERS

1—8 roll 32" face.
3—7 roll 62" face.
1—7 roll 86" face.
1—7 roll 56" face.

TRIMMERS

1—56" Undercut Trimmer
1—42" Cowan.
1—Saybold 84" with motors.

VACUUM PUMPS

1— 4 Nash Hytor.
2—Nash—22H.
1—Nash L2.

AMERICA'S LARGEST BUYERS OF PAPER MAKING MACHINERY

SITUATIONS WANTED

LITERATURE SURVEYS, ABSTRACTIONS, COMPILATIONS, 20 years experience in doing TRANSLATION WORK (GERMAN, ENGLISH, FRENCH, ITALIAN, SPANISH); dissertations on the chemistry of celluloses, derivat. of cellul., nitric acid cooking pulp, highest quality rayon pulp, scientific considerations of all kinds of paper making problems, testing meth., a.s.a. Long practice in both the pulp and paper line (Knowledge of paper making and all fields of commercial line (administr., cost-account., selling pract., export., foreign correspondence)). Seeking opportunity in Research-Development—Manufacture to handle sales, correspondence, scientif. translatices, bibliographical and patent search work, a.s.a.—Address Box 49-60 care Paper Trade Journal. F-3

PLANT MANAGER—Thorough experience in converting paper and boards; wants change to position offering better opportunity. Excellent production and labor relations background. Address Box 49-15 care Paper Trade Journal. F-24

SUPERINTENDENT or ASSISTANT—Thorough experience on Fourdrinier and Yankee Machines making toilet, napkins and light weight specialties, news and Kraft. Desires position with progressive company. Address Box 49-61 care Paper Trade Journal. F-17

SUPERINTENDENT AVAILABLE — At once. Thoroughly experienced Cylinder, Harper or straight Fourdrinier machines. Can solve stock trouble to meet test or quality. Guarantee results all grades. Address Box 49-64 care Paper Trade Journal. F-10

CHIEF ENGINEER or Assistant Manager—Mechanical Engineer, college graduate, age 40, 20 years experience in all phases of construction maintenance, plant layout and operation. Presently employed. Desire change. Address Box 49-62 care Paper Trade Journal. F-10

MECHANICAL ENGINEER. Desires position as Plant or Resident Engineer. Qualified by 26 years experience in chemical and semi-chemical pulp, paper and board mills. Power, maintenance and construction supervision. Address Box 49-40 care Paper Trade Journal. F-17

CHEMIST — EXPERIENCED CHEMIST AVAILABLE. Address Box 49-38 care Paper Trade Journal. M-3

CHEMICAL ENGINEER—Experienced, laboratory organization, pilot plant, testing stations, test methods, quality, control, processes, analyses. Address Box 49-39 care Paper Trade Journal. M-3

ENGINEER, Plant or Master Mechanic. College training. Good draftsman. 26 years experience, Steam, lumber, paper, chemical plants, construction and maintenance. Available at once. Box 49-34 Paper Trade Journal. F-24

FOR SALE

FOR SALE

1—102" Cameron Slitter and Winder Type 18. 106" drums. Rewind capacity 60" diameter.

J. J. ROSS COMPANY
250 Frelinghuysen Ave., Newark 5, N.J.
Tel. Bigelow 3-3720

J-20

FOR SALE

One complete new drum reel for 72-76" trim. Price reasonable.

One complete spiral tube machine with foot cut-off attachment. Machine is in operation cutting 100,000 cores in 24 hours. Write Box 49-65 c/o Paper Trade Journal. F-10

FOR SALE

1—90" Creping and Plasticizing Machine. Complete with Dryer Section, Rewind and AC Motor Equipment.
1—New 24" Model X Schultz Automatic Roll Winding Machine. For Paper, Foil and Acetate Film.
1—65" Martin Squeeze Roll Waxing Machine. For Water, Finish or Dry Waxing. Equipped with 3—16" diam. Bronze Cooling Drums. AC Motor Equipment.
1—63" Dietz Heavy Type Friction Rewind Toilet and Towel Machine. 4½" x 5" Toilet and 7½", 13½" and 15" Towels.
1—Dryer 48" diam. x 88" Face. Complete with Frames and Bearings.
1—Weber Cellophane Bag Machine—Model 2CN-247—With Motor Equipment.
1—Brand new 30" Hudson-Sharp No. FE-10 Roller Bearing Embossing Machine, late type, Linen Design Rolls.
1—50" Camachine, Type 28, Model 3D. Duplex Rewind for 30" Maximum Rolls. Shear Type Slitters. "V" Belt Drive. No Motor. As good as new.
1—50" Camachine. Type 24—Model 7A, with 20 sets of cutters. As good as new.
1—52" Universal Type 8, Model 5 Camachine. Reconditioned.
1—48" Inman Board Slitter and Rewinder. Rewinds 48" diameter rolls.
1—48" Langston, two shaft Slitter and Rewinder.
1—42" Type 6, Model 1A Camachine with 20 sets of slitters.
1—32" Johnstone TWELVE Slitter and Rewinder with sufficient knives to slit ¾". Score cut. Excellent condition.
Power Paper Cutters: 4 Seybold: 40"—10Z, 54" 20th Century, 54" Holyoke and 56" Dayton. 6 Oswego: 34", 38", 44", 50", 57" and 74". 2 Acme: 32" and 42". 1 White: 44". 1 S&W Undercut: 63".
1—84" Hamblet roller bearing new duplex sheet cutter, Model 28, complete with slitting attachment, six pairs of slitters. With new Hamblet 84" electrically driven duplex layboy and two roll backstands for 30" diameter rolls.
1—76" Hamblet Roller Bearing Duplex Rotary Sheet Cutter with Slitting Attachment. Maxson Overlapping Delivery. Hamblet Duplex Layboy for 2 piles and ten-roll double-deck backstands.
1—72" Brannon Ream Folder.
1—96" Clark Aiken anti-friction bearing Single Rotary Sheet Cutter with slitting attachment. Moore & White 5 partition Layboy and 6 roll double-deck backstands. Excellent condition.
1—New 100" Mamco layboy with single type tandem tape system with air delivery for one pile.
1—Erie Layboy, size 85" x 45".
1—96" Moore & White Sheeter with layboy.
1—104" Moore & White sheeter with layboy and six roll backstands.
1—74" Norwood 9 roll stack of Super Calenders. Complete with DC Motor Equipment.
1—54" and 1—52" Holyoke 9 roll stack of Super calenders. With drive, unwind stand and revolving reel unwind.
1—5 roll Sandy Hill machine stack of calenders. Face of rolls 82".
1—Jones Standard Jordan. Practically new. Split ⅞" filling for plug and shell. Direct connected to 75 HP standard AC motor.
2—7 x 16" Shartle Duplex plunger stock pumps. Belt driven. Fair condition.
1—31" Embossing Machine: 3 designs—Cobweb, Diamond and Line.
1—Noble & Wood Mammoth Jr. Jordan direct connected to a 150 HP, Type H.R., 440 volt, 3 phase, 60 cycle 400 R.P.M., with 5 KW exciter, Westinghouse synchronous motor.
1—S&S Complete Toilet Core Making Equipment. Consisting of Reel, Glue Pot, Single Belt Tube Winder, Automatic Cut-off Saw and Tube Recutter.
2—81" Dietz Toilet Paper Perforators. Sheets 4½ x 4½ and 4½ x 5 and paper towels perforated 7½" and 13½".

GIBBS - BROWER COMPANY, INC.
21 East 40th St., New York 16, N. Y. F-3

FOR SALE

1½ ton Cleveland Tram Rail Bridge Type Crane with 80 foot bridge and vertical type grab complete with electric motors and spare grab. All in good operating condition. Can pick up rolls and deliver them either in ends or sides. KEYSTONE BOX COMPANY, P. O. Box 7821, Sharpsburg Station, Pittsburgh 15, Pa. F-3

FOR SALE

POWER REAM CUTTERS

New 44" National Automatic Clamp Power Cutters, with A.C. motors — carried in stock, ready immediate shipment.

Also specializing in the NEW 57" National Hydraulic—just out. Send for illustrated circular on this wonderful smooth running machine. Not a single gear on it.

THOMAS W. HALL COMPANY, INC.
Stamford, Conn.
(N. Y. Sales Office: 120 West 42nd St.)
Also rebuilt Sheeters, Slitters, and Rewinders.

FOR SALE

Paper Power Cutters; Slitters & Rewinders; Die Cutters; Printers; Scorers & Creasers; Gluers & Wrappers; Coaters; Laminators; Waxers; Stitchers; Brightwoods.

Write for latest bulletin listing available paper box & paper converting machinery. Get on our permanent mailing list for up-to-date inventory.

SOUTH WABASH ENGINEERING CO.
2929 So. Wabash Ave.
Chicago 16, Ill.

TF

FOR SALE—SEAMLESS IRON PIPE

441 Feet (21 foot lengths) 10"I.D. 10¾" O.D. 1200# Test; 126 Feet (21 foot lengths) 8"I.D. 8⅝" O.D. 1600# Test; 54 Feet (18 foot lengths) 8"I.D. 8⅝" O.D. 1600# Test.

Address inquiries to:
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220 East 42nd Street
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F-3

FOR SALE—EMBOSSER, B. F. Perkins, 45" now in full operation. Complete including steel engraved roller and two paper rollers unwind and rewind, $3500.00. Selling to make room for new machine. JOSEPH M. KATZ & COMPANY, Paper Square, Pittsburgh, 6, Pa. TF

FOR SALE—3 S. O. S. Grocery Bag Machines (Potdevin), One Lockport Garment Bag Machine, One Potdevin Millinery Bag Machine, One Republic Notion Bag Machine with one color aniline printer, One new Guillotine, used one month. Address Box 49-58 care Paper Trade Journal. F-3

FOR SALE—34" Camachine #6 Slitter-Rewinder—rebuilt like new; 58" Finley Sheeter with 6-roll Back-Stand. THOMAS W. HALL COMPANY, INC., Stamford, Conn. F-10

FOR SALE—52" Slitter-Rewinder manufactured by Cannard, Score-cutter. Rebuilt. Ran day and night until recently when it was replaced by larger machine. Exceptional value at $2,500.00. THE PAPERCRAFT CORPORATION, Paper Square, Pittsburgh, Pennsylvania. TF

PAPER COATING MACHINERY—Waxing, Oiling, Carbon, Laboratory Coating and Treating Machines. New improvement. MAYER MACHINE COMPANY, Inc., 1313 Buffalo Road, Rochester 11, N. Y.

WANTED

WANTED—W & P Shredders, Evaporators, Generators and Boilers, Slitters, Cutters, Hydraulic presses, Sheridan Presses, Dryers. Address Box 48-223 care Paper Trade Journal. TF

FOR SALE

HEATERS
1—Iron tub 84x84 Shartle breaker
1—Diffs high speed with roll 56x48

CUTTERS
1—130" Horne duplex with duplex layboy
1—100" Hamblet duplex with duplex layboy
1— 94" Clark single with layboy
1— 84" Clark single with layboy
1— 70" Clark
2— 48" Hamblet

DRYERS
1—12 ft. x 188" Yankee
1—12 ft. x 136" Yankee
2— 8 ft. x 174" Yankee
5— 5 ft x 174"
4—48 118"
2—48 x 100"
1—48 x 80"
16—36 x 65"

FOURDRINIER PARTS
1—Wire 36' x 110" anti friction with 10" suction couch and three sets presses, rolls 20 x 100".
1—100" Fourdrinier Part with 30" suction couch, 20" diameter breast roll, 8" diameter table rolls.

JORDANS
1—No. 2 Appleton, anti friction, with 150 HP motor
1—No. 5 Miami, anti friction
1—No. 2 Dillon
3—Noble & Wood Pony

MOULDS
1—36 x 123"
1—60 x 84"
1—48 x 84"
1—66 x 84"

PAPER MACHINE
1—102" trim combination machine
1—84" trim facial tissue and M G machine with 8" dia. Beloit dryer
1—84" Fourdrinier paper machine

PUMPS
2—12 x 12 Gould triplex
1—10 x 20 Shartle duplex
1— 7 x 10 Gould triplex

SCREENS
2—No. 1 Bird
Flat screens, 3 to 16 plate
Leith Walk and Moore & White rotary

SLITTERS
1—214" R ce Barton
1—150" Moore & White four drum
1—150" Warren two drum
1—132" and one 120" Pusey & Jones two drum
1—112" Kidder
1— 82" Langston
1— 36" Cameron
1— 8?" 46" W Cameron

SUCTION ROLLS
1—30 x 180" Couch
1—22 x 180" Press
1—25 x 166" Couch
1—18 x 146" Couch
1—18 x 92" Couch

ELECTRIC TRUCKS
1—Baker electric truck, model D T O
1—Walker electric highway truck, 4000 lb. Capacity, Model 42 with generator
1—Automatic tractor and plier

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1000 amp. 60 volt Westgh. SK Welding Gen.
1—150 KW West. SK 125 v. 1200 RPM.
300 KW West. SK 250 v. 1200 Rpm.
125 KVA 220/3/60 277 RPM West.
150 KW Triumph 250 v. cp.wd. 600 RPM.
150 KW G.E. 550 v. 1100 RPM cp.wd.
1500 amp. 60 v. West. SK Generator

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1100 cu. ft. 100# Chg. Pneu. 2 stage. 19" & 11" x 12" with intercooler, aftercooler, unloader, air receiver dir. con. 215 HP West. Syn. Motor 2200 v. 3 ph. 60 cy. 257 RPM with belted 8 KW SK West. exciter and manually operated starting panel. Good condition. Immediate shipment.
755 CFM Chic. Pneu. two stage Belted.
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245 cu. ft. Ing. Rand belted ERI
220 cfm 100# Ing. Rd. Gas. Portable.
175 cu. ft. 100# pres. Chic. Pneu. 9x8.
1—164 cu. ft. Ch. Pneu. Steam Type.

AC MOTORS (3 ph. 60 cy.)

HP	Make	Wdg	Spd.	Type
500	Elect. Mery. Syn.		120	
300	G.E.	S.R.	450	I M
300	G.E.	S.R.	600	I M
300	West.	S.R.	600	CW
150	G.E.	Syn.	900	ATI
125	West.	Syn.	277	
120	Cr. Wh.	S.R.	290	
100	G.E.	S.R.	450	I M
100	Al.Ch.	S.R.	580	
75	West.	S.C.	860	CS746
75	G.E.	S.R.	600	I M
50	Vert. G.E.	S.C.	1150	KT336
50	G.E.	S.R.	860	I M
50	G.E.	S.C.	865	I K
50	A.C.	S.C.	1750	
40	G.E.	S.C.	860	KT
35	G.E.	S.C.	1150	I K
30	Vert. G.E.	S.C.	1150	KT526
30	G.E.	S.C.	1200	KG 405
25	C.Wh.	S.C.	600	SC504
25	500 v. West.	S.C.	1750	CS365
25	Cr.Wh.	S.C.	865	
25	Cr.Wh.	S.R.	580	1210
15	West	S.C.	1750	CS326
15	L.A.	S.C.	3600	Fr. 324

HP	Make	Wdg	Spd.	Type
15(2)	G.E.	S.C.	1150	KT
10	West.	S.C.	570	CS566C
10	West.	S.C.	870	CS464C
10(6)	West.	S.C.	1200	CS370C
7½	G.E.	S.C.	1700	FT944
7½	Comm.	S.C.	865	P326
7½	West.	S.C.	3440	CS254Y
5	West.	S.C.	580	CS546
5	West.	S.C.	1750	254
5(2)	West.	S.C.	1200	CS
5/11½	L.A.	S.C.	580 1800	2555
5	Master	S.C.	1125/37	PA
5	Burke	S.C.	420	EM2
3	West.	S.C.	1100	CS
3	West.	S.C.	1750	
2	West.	S.C.	600/1200	CS324
2	550v.West.	S.C.	1730	CS224
2	Imp.	S.C.	480	

AC MAGNETIC STARTERS (3 ph. 60 cy.)
2—700 HP West. 2300 v. Syn. Line Starters.

MONORAIL HOISTS
2—½ Ton Conco 220/3/60
1—1½ Ton Reading 220/3/60
1—2 Ton Link Belt 220/3/60

MOORHEAD ELECTRICAL MACHINERY CO. Pittsburgh 19, Pa. • Mayflower 7900

WANTED

WANTED
Heavy duty trimmer, 64" or wider, for use on boxboard. Please give full information and lowest cash price. Address John W. Schuster, Miamisburg Box Board Div., Miamisburg, Ohio. F-3

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Titaniums—Glycols
Alkalies—Waxes—Solvents
Colors—Oils—Residues, etc.
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F-3

WANTED

WANTED: 1 — Dornbusch Embossing machine with 45" roll face and approximately 27" circumference. We will be pleased to hear of any embosser approximately these dimensions. Address Box #49-59 care Paper Trade Journal. F-3

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Top prices paid
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Phone: Beekman 3-5894 F-3

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WANTED—Brightwood Box Machine. Address Box 48-224 care Paper Trade Journal. TF

PAPER MANUFACTURER desire to purchase or invest in converting business of standard paper products. Address Box 48-222 care Paper Trade Journal. TF

WANTED—Used hard fibre CORE CUTTER for 3" diameter cores—68" or wider. For converter use. Address Mr. J. Heller, Milprint, Inc., Milwaukee 1, Wisconsin. TF

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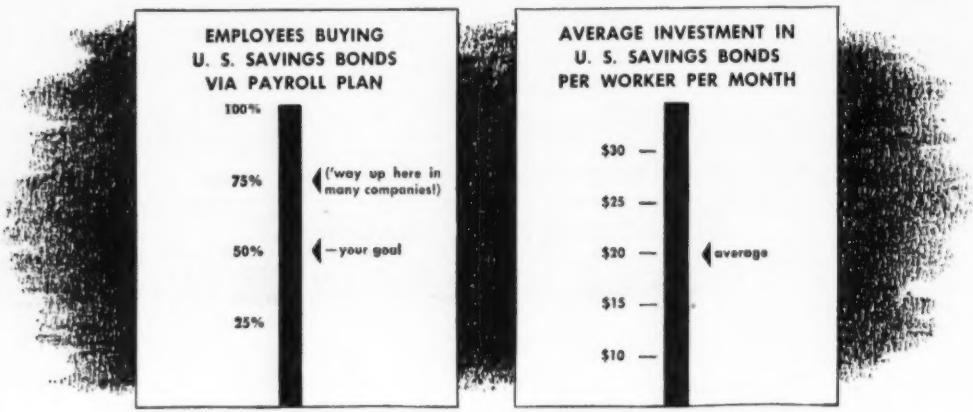
How is YOUR company doing in this "EVERYBODY-BENEFITS" plan?



Compare your employee participation with others who have Payroll Savings

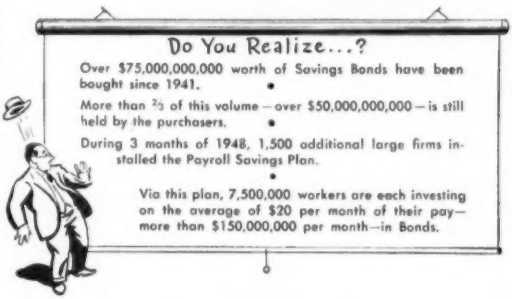
If the figures for your company fall below those shown above, you're missing your share of benefits of the Payroll Savings Plan! These benefits are described below. Nation-wide experience proves that when top management puts the "OK" on the Plan, its benefits rise sharply.

BENEFITS TO *EMPLOYEES:* Every $3 invested in Savings Bonds pay $4 at maturity. Workers gain a 33⅓% return on their money—enabling them in the future to buy more of the things they will want—plus the peace of mind that goes with regular saving.

BENEFITS TO *EMPLOYERS:* The feeling of security that goes with participation in Payroll Savings makes workers more contented. Worrying less, they work better. Among the more than 20,000 large companies with Payroll Savings, records show that—following installation of the Plan—production increased, absenteeism and accidents decreased!

BENEFITS TO THE *NATION:* The Payroll Savings Plan is a powerful deterrent to inflationary forces. Every Savings Bond dollar built up in the Treasury withdraws a dollar from the swollen spending stream. The Plan thus contributes to national security—which affects *your* security!

WHAT CAN YOU DO? If your company has the Payroll Savings Plan, make sure it's being adequately promoted—backed by your top executives—to bring your company its full measure of benefits. If you haven't yet installed the Plan, why pass up its benefits any longer? All the help you need is available from your State Director, Savings Bonds Division, U. S. Treasury Department. He is listed in your telephone book. Call him now!


Do You Realize...?
Over $75,000,000,000 worth of Savings Bonds have been bought since 1941.
More than ⅔ of this volume—over $50,000,000,000—is still held by the purchasers.
During 3 months of 1948, 1,500 additional large firms installed the Payroll Savings Plan.
Via this plan, 7,500,000 workers are each investing on the average of $20 per month of their pay—more than $150,000,000 per month—in Bonds.

The Treasury Department acknowledges with appreciation the publication of this message by

PAPER TRADE JOURNAL

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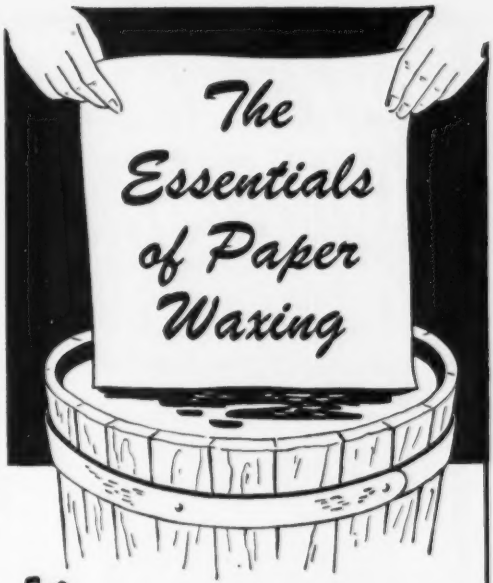

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Potdevin roll-to-roll waxers wet or dry wax **paper, tissue** *or* **glassine** *on one or both sides . . . Potdevin sheet waxers handle* **folding cartons, board** *or* **sheet stock.** *Special waxers for heavier roll stocks such as are used for* **drinking cups** *and* **straws.**

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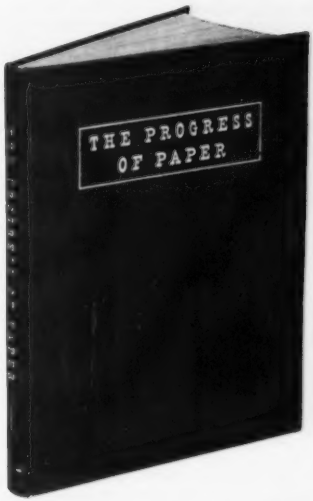
The Progress of Paper

Papyrus to Parchment to Paper
2000 B.C. to 1947 A.D.



Brief Summary of Contents

Map of origin of paper, Egypt to the Near East. Also map of area of invention and progress of production. Illustrated with drawings and photographs of actual material, some of ancient origin, dating from 2,000 B.C. to 1300 A.D.

European development.

Spain, Italy, Greece, France, Belgium, Holland, Germany, Poland, Russia, England, to 1800 A.D.

Invention of machines, expansion in Europe with many odd facts to 1850 A.D.

Advancing mechanical progress brings more inventions abroad—to 1875 A.D.

American phase of transition, 1690-1775.

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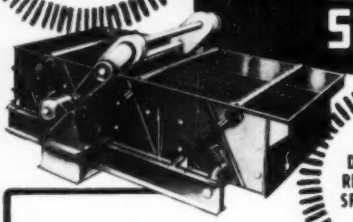

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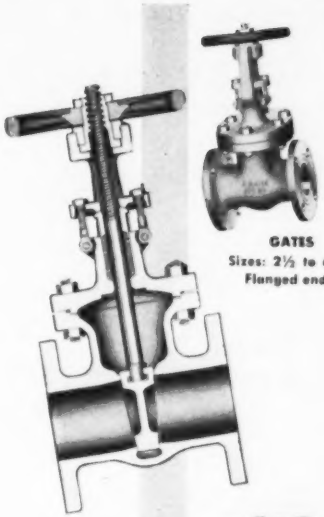

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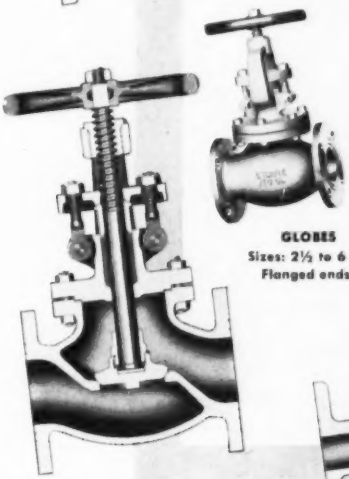

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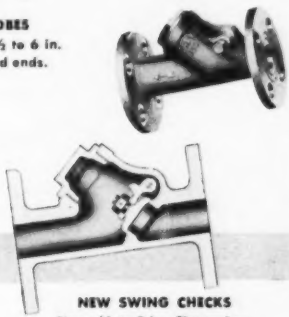

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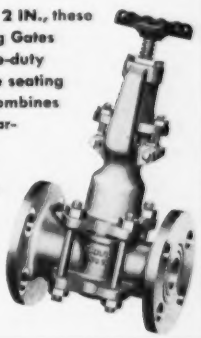

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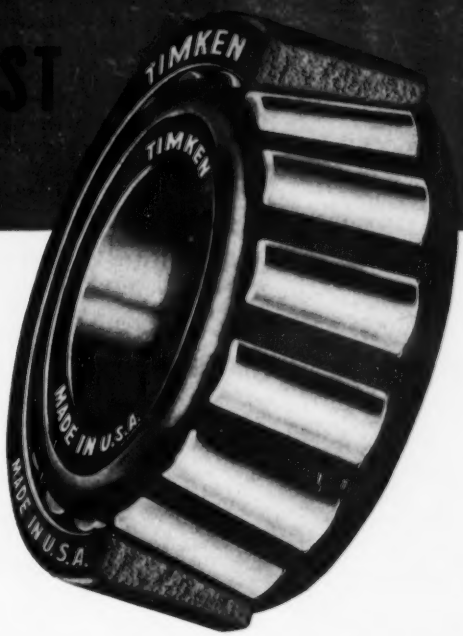

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